

# MYMI INDUSTRY GUIDE 2023

## Contact Us

✉ [info@mymi.org.au](mailto:info@mymi.org.au)

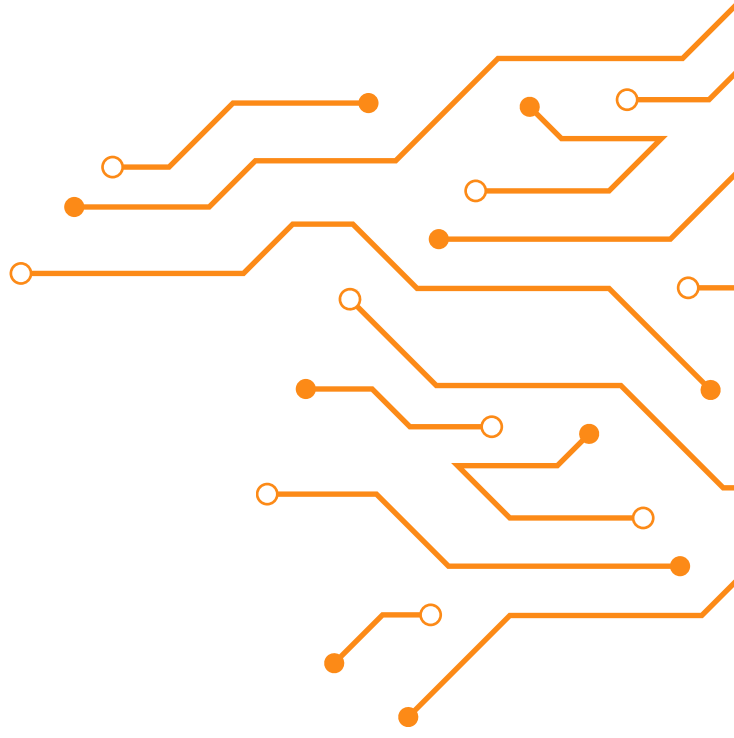
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📷 [mymi.medtech](https://www.instagram.com/mymi.medtech)



MONASH  
YOUNG  
MEDTECH  
INNOVATORS



# FOREWORD

Welcome to the MYMI Industry Guide for 2023! This guide aims to provide valuable insights and inspiration to those with interests in the biomedical engineering field. We understand the anxiousness and loss of direction associated with making early career decisions. MYMI's Industry Guide hopes to clarify uncertain career pathways, whilst highlighting some of the current prominent change-makers in the industry which you can potentially collaborate with in the near future.

We would like to express our gratitude to our sponsors, Deloitte, CSIRO, 4D Medical, and Monash Institute of Medical Engineering, for their generous contributions to the creation of this guide and this year's MedTech Mixer event. This year's MedTech Mixer and Industry Guide have enabled our team to continue to expand the reach of the MYMI family and community. We hope that the Industry Guide and MedTech Mixer will proceed at an even larger scale next year and truly remain as a flagship event within the MYMI calendar.

We would further like to acknowledge and show our appreciations to the members of the MYMI committee that contributed to the creation of this comprehensive guide for students interested in MYMI and the MedTech sphere. This guide would not have been possible without the Partnerships team, directed by Kimberley, who have been reaching out to stakeholders and consistently communicating with all other parts of the team. Other areas of the guide focused on coursework and research opportunities for students were compiled elegantly by our Engagement, Culture and Compliance branches, and we would like to recognise their efforts in researching and promoting the numerous pathways available to Engineering and other students at Monash University. Finally, the promotions co-directors Upani and Nguyet have been invaluable in helping to design and curate the guide, helping bring all the parts together while also utilising social media to advertise and communicate with our community. Special mentions to Dan, Charmaine, Chloe and Judy for their extensive contribution.

As the Managing Director of Operations and on behalf of MYMI, I would like to thank everybody that views this guide and the attendees of the MedTech Mixer for the everlasting support towards MYMI. We hope that this comprehensive guide can spark your inspirations and reduce any anxiousness you have about the field of biomedical engineering.

All the best, Lloyd



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# ACKNOWLEDGEMENT OF COUNTRY

We wish to acknowledge the people of the Kulin Nations, on whose land we gathered for meetings, collaboration and the ultimate creation of this guide. We pay our respects to their Elders, past, present and emerging.

## ABOUT MYMI

### Who we are

An interdisciplinary organisation dedicated to achieving positive impact through medical technology, healthcare and biomedical innovation. We bring about collaboration between undergraduates, graduates, PhDs and Early Career Researchers (ECRs) regardless of home institution, discipline, creed or experience.

### Our Vision

To engage and connect young visionaries to academia and industry through strengthening partnerships in all sectors of medical technology, healthcare and biomedical innovation.

### Our Mission

Our primary goal is to be the epicentre for medical technology, healthcare and biomedical innovation.

Through our work we:

- Build and provide a clear pipeline and network for young people to enact positive systemic change
- Focus on facilitating and sparking interdisciplinary projects in healthcare
- Improve access to new and essential medical and healthcare technology through sustainable practices

# INTRODUCTION OF COMMITTEE

MYMI would not be who we are today without the dedication and support of our amazing team. Our MYMI Committee is made up of several branches and coordinated by our Managing Directors of Operations. Each branch is led by Director/s who plan the year ahead and coordinate the execution of their role within MYMI. These branches did not always exist and only came to be through our development and progression as a team when an unmet need was discovered. Students with an interest in MedTech would come to us with a specific skill they had but no role to fit. Therefore we did the next best thing and helped them create a role that would work for their skill set and enable them to develop professionally and technically.

Our committee is made of the following branches:

## **Engagement Branch:**

To increase engagement both internally and externally by creating high quality events which hinge on the unique perspective and skillset of the MYMI committee and projects team.

## **Promotions Branch:**

To increase MYMI's awareness to a larger audience scope, especially outside of just Monash and establish a deeper understanding of MYMI's purpose (inc. values, events, projects) to our community, and establish authority within that space.

## **Partnerships Branch:**

To build relationships and connections between MYMI and academia, industry and the community, for the collective health of the ecosystem as a whole.

## **Compliance Branch:**

To regulate and enforce MYMI's administrative processes and professional values as set out within the Constitution and other policy documents.

## **Culture Branch:**

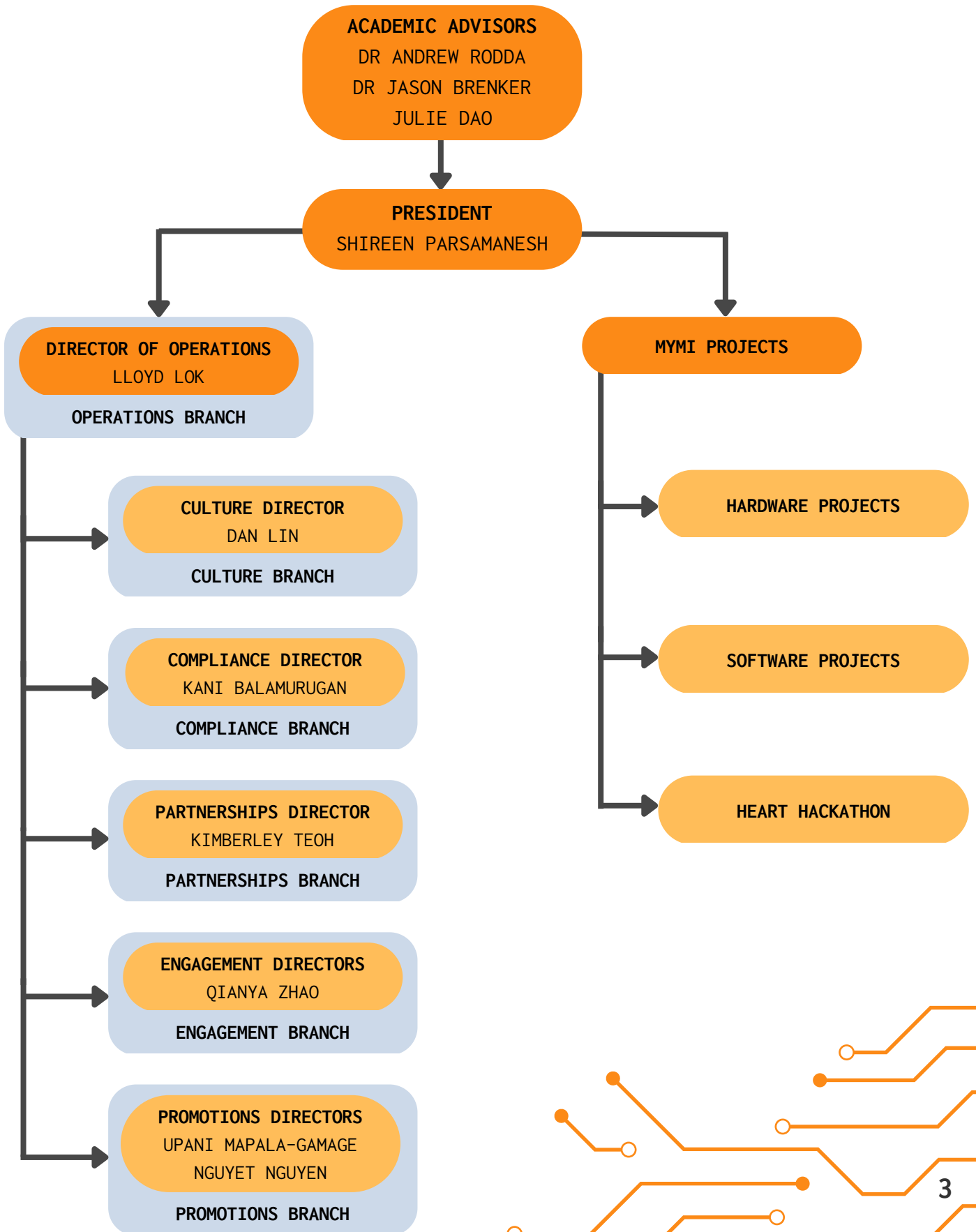
To provide a compassionate place for personal and professional development of MYMI's committee members.

## **Operations Branch:**

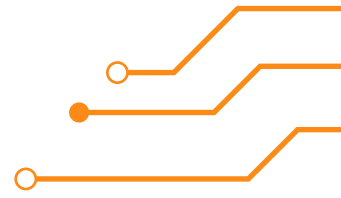
To enhance the efficiency, accessibility and fluidity of the team through maintaining an organised administrative system, facilitating collaboration and problem solving through general representatives, and taking active steps towards an engaging outreach program and innovative sustainability initiative.



# MYMI FAMILY TREE



# INTRODUCTION OF PROJECTS



Over the past years our Projects Branch has been expanding exponentially. We aim to build a supportive and well-resourced infrastructure key to ensuring far reaching project development and longevity. Currently we have 10 projects under incubation sourced from HISS, MedHack and other external sources. Each project is focused on fulfilling a current unmet clinical need.

## **Project Aeris:**

Increasing apnoeic time during intubations, and decreasing the risks associated with intubation complications.

## **Project Aesop:**

A mobile application to deliver social stories in a way that reduces maladaptive behaviours and enhances the psychosocial wellbeing of paediatric patients.

## **Project Beta:**

An app developed for patients living with diabetes to help better manage their condition.

## **Project Dream:**

A sleeping device that will alleviate the risk of Sudden Unexpected Death in Infancy (SUDI).

## **Project Gravitar:**

Predicting pregnancy disorders such as gestational diabetes mellitus (GDM) and hypertensive disorders in pregnancy (HDP) within the first trimester to allow for early intervention.

## **Project Impact:**

Minimising injury to athletes by designing a genital protector strong enough to withstand the impact of a high-speed projectile.

## **Project metaQI:**

A cloud-based web-app designed to track, store, and share Quality Improvement (QI) projects across hospitals to improve communication and promote collaboration between healthcare staff.

## **Project Reclaim:**

Project Reclaim aims to explore the potential of biochemically returning plastics to their natural form to create fuel or into other Australian made and certified materials.

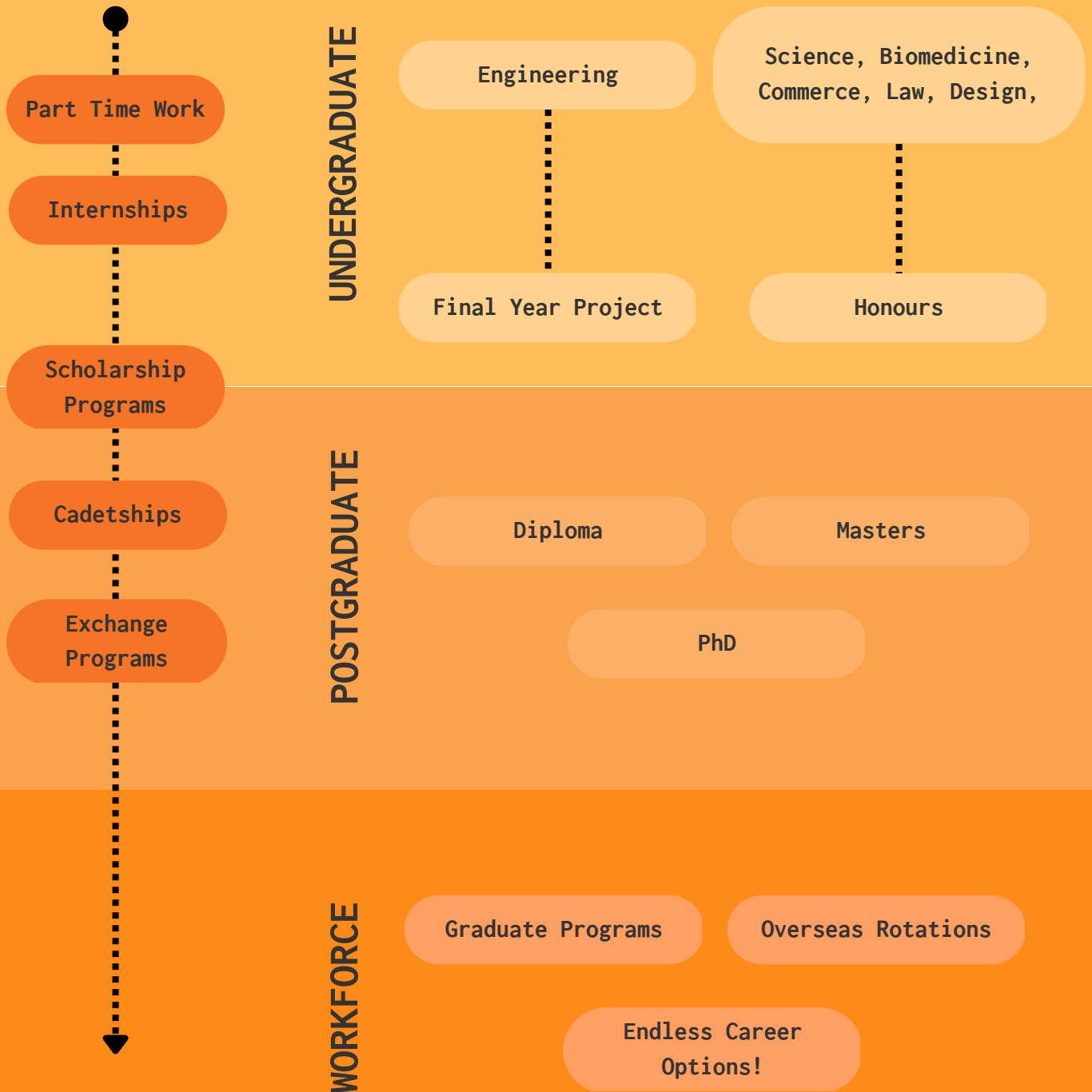
## **Project Rudolph:**

Affordable and accessible diagnostic and monitoring solution for Ear Nose & Throat (ENT), Sleep and Respiratory conditions.

## **Project Swivel:**


An electric wheelchair storage solution for greater independence in the community.

# CAREER PROGRESSION FLOWCHART





# OUR INDUSTRY SPONSORS 2023





## Who we are and what we do

Housed within the Enterprise Technology & Performance portfolio, the Technology Strategy & Transformation team is the pre-eminent end-to-end technology advisory and execution leader in Australia

### DELOITTE CONSULTING

Strategy, AI & Transformation	Customer & Marketing	Core Business Operations	Human Capital	Enterprise Technology & Performance (ETP)
Strategy & Business Design	Advertising, Marketing & Commerce	Business Engineering	HRT	Technology Strategy & Transformation (TS&T)
Transformation & Operations	Digital Customer	Platform Engineering	HRT2	Finance Strategy & Transformation
Data & AI	Customer Strategy & Applied Design	Cloud Engineering	Organisation & Transformation	SAP
Actuaries			Workforce Transformation	Oracle
				Supply Chain & Procurement


## Empowering client to reimagine and reconfigure their organisation and the value chain is operates within



Reimagining healthcare to drive affordable care that delivers improved health outcomes for all Australians



Transform Government and public service operations in key areas of core service delivery, regulation commissioning, and procurement

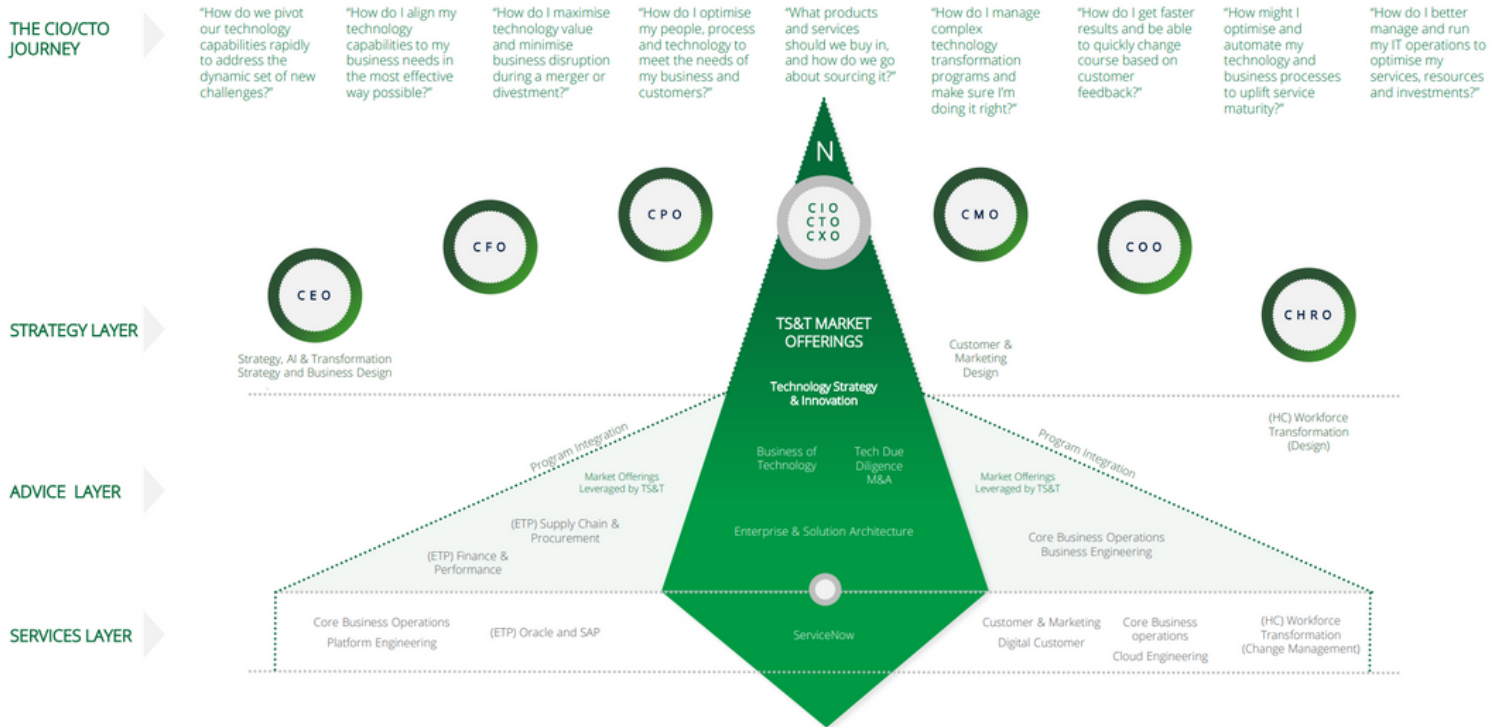


Future-proofing banking and driving operational resilience for rapidly evolving customer needs and preferences.

### Operations Transformation

Operations transformation	Banking and Financial Services industry	Healthcare	Government and Public Sector
Operational excellence	Core operational excellence	Reimagining public and private healthcare	Agency Transformation and Commissioning
Lean, Process Modelling and bionics	Lean, process modelling and bionics	Clinical and non-clinical process redesign	Public service regulation and process redesign
Strategic cost and performance	Strategic cost and performance	Hospital and health service productivity	Value for money and productivity
Transformation program delivery	Financial services industry transformation (regulatory)	Clinical and corporate service transformation	Large scale transformation & program management
Target operating model transformation	Financial services industry operating model transformation	Care models of the future	Agency operating model and machinery of government

# Explorers of technology – The Technology Compass for the Chief Information Officer



## Deloitte's Healthcare Practice

We are one of the largest healthcare consulting practices in Australia and the largest globally, with the opportunity to collaborate with a diverse and broad network of colleagues and clinicians.

### Our Healthcare Practice in Australia

As the world's largest professional services healthcare practice, we bring a passion to transform healthcare systems and a drive to act as an agent of positive change in the Australian healthcare market. Our mission is to help healthcare organisations navigate the challenges, and opportunities they face, and to co-create innovative solutions that deliver and manage safe, cost-effective, quality care in a competitive environment.

We have deep operational expertise and employ individuals with a wealth of experience in hospital operations and healthcare system management in Australia, as well as deep technical capabilities in strategy & transformation, operations excellence, technology implementation and health economics. Drawing on this experience, Deloitte understands the complexity, scale and intricate nature of transformation in healthcare.

In recent years, we have made a series of bold acquisitions, such as Paxton Partners, The Checkley Group, Francis Health and Entrago, which have allowed us to build upon our existing capabilities to ensure we continue to bring market leading capability and experience to our clients.

As the largest healthcare professional services provider, Deloitte has a wealth of experience in complex health transformations. Importantly, this includes deep capability in digitally enabled transformation, productivity improvement and health system reconfiguration projects which span not only the diagnostic phase but critically continue through to implementation and sustainability.

### Our global research

Deloitte's UK and US practices have established Centres for Health Solutions. The aim of these centres is to inform stakeholders in the global health care system about emerging trends, challenges, and opportunities using rigorous research. It further enables Deloitte to position itself as a leading centre for health-related policy and strategy insights. Most importantly, these cutting-edge centres actively promote an environment that encourages and supports innovation in health solutions.

### External recognition

Deloitte has been recognised as a global leader in Healthcare and Life Sciences including being ranked #1 globally in Healthcare Consulting, based on revenue, by ALM Intelligence. In Vault Rankings: Consulting to Health Care Sector – Deloitte ranked #2 for best consulting firms for health care consulting.

### Who we are

Within our global team we have...

8,800 healthcare practitioners

250 clinicians

In Australia we have...

250 People dedicated to and working in healthcare, with a breadth of deep operational pedigree.

### How we work

At Deloitte we engage in innovative ways of working that include:

- Emphasis on clinical engagement and leadership to drive sustainable change
- Co-design and stakeholder engagement to understand the needs and concerns of different stakeholders across the sector
- Leveraging AI and automation for innovative solutions and insights

### Who we serve

Deloitte serves clients in 90 different countries...



In Australia we work with private, public and not-for-profit providers, funders and insurers across all jurisdictions at the national, state and district level.

### Our Network

Our Clinical Challenge Panel is a global network of subject matter experts covering various clinical specialty areas.

100+ clinicians

We draw on this network as required to support activities such as: models of care design, leading best practice clinical approaches, evaluation design and planning.





## Want to take your research further?

Our ON Program can help you develop the skills needed to fast-track your technology and ideas into the market at pace

[csiro.au/ON](https://csiro.au/ON)

Australia's National Science Agency



B&M | 23-00193



# CSIRO's ON Program: Building entrepreneurial and commercialisation skills of Australian researchers

Since 2015, the ON Program has helped more than 3000 people from 52 Australian research organisations turn their science into real-world solutions. The program is focused on building the skills of teams from universities and publicly funded research agencies.

**ON Prime** is designed to help research teams take their projects to the next level through customer discovery activities and more. Expert facilitators will support teams to build evidence for the impact of their research, so they can make a difference in the world and attract the resources needed along the way.

## ON Prime fast facts

- Focus: Customer discovery and market validation
- Duration: 9 weeks
- Cost to participate: Free
- Incentive: Up to \$5000 to reward engagement and learning velocity
- IP ownership: Retained by team/sponsoring institute
- Venture equity taken: None
- Next call for applications for ON Prime will open in mid-2023, for delivery in late 2023

[csiro.au/ON-Prime](https://csiro.au/ON-Prime)

**ON Accelerate** gives teams the skills and support to validate and develop a high potential innovative venture. The program will connect you to a network of experts who will support (and challenge) you as you work to confirm customers, refine your business model and prepare for investment.

## ON Accelerate fast facts

- Focus: New venture creation
- Duration: 14 weeks
- Cost to participate: Free
- Incentive: Up to \$30,000 to fund participation and incentivise market traction
- IP ownership: Retained by team/sponsoring institute
- Venture equity taken: None
- Next call for applications for ON Accelerate will open in mid-2023, for delivery late 2023 to mid-2024

[csiro.au/ON-Accelerate](https://csiro.au/ON-Accelerate)

The ON Program will very quickly help you work out if you have a feasible product and the appetite to commercialise it.

**Erich Kisi, CEO and Co-Founder MGA Thermal**

## Have a question?

If you have questions about CSIRO's ON Program, please contact us via email [on@csiro.au](mailto:on@csiro.au)

Australia's National Science Agency



# Careers at 4DMedical are making a real difference to people.

Our achievements include developing the world's only four-dimensional respiratory imaging capability: XV Technology®. This provides clinicians, researchers and patients with detailed insight into lung function not available using traditional modalities. We work revealing physiological motion and function, not just anatomical structure.

Clinical translation of this unique technology is positively impacting the lives of real people affected by respiratory compromise.

We have also engineered the world's first and only dedicated respiratory imaging platform, the XV Scanner – widening access to healthcare\* through an integrated software + hardware solution.

Opportunities to join our expanding team in unique professional roles can define your future.

**Medical Technologies**

**Engineering (software, hardware, research)**

**Quality Assurance**

**Image Processing**

**Medical / Clinical**

**Human Resources**

**Mathematics**

**Regulatory Affairs**

**Manufacturing**

**Finance**

**Legal**

**Marketing**

[seek.com.au/4dmedical-jobs](https://seek.com.au/4dmedical-jobs)

[4dmedical.com](https://4dmedical.com)



\*TGA/FDA approvals pending



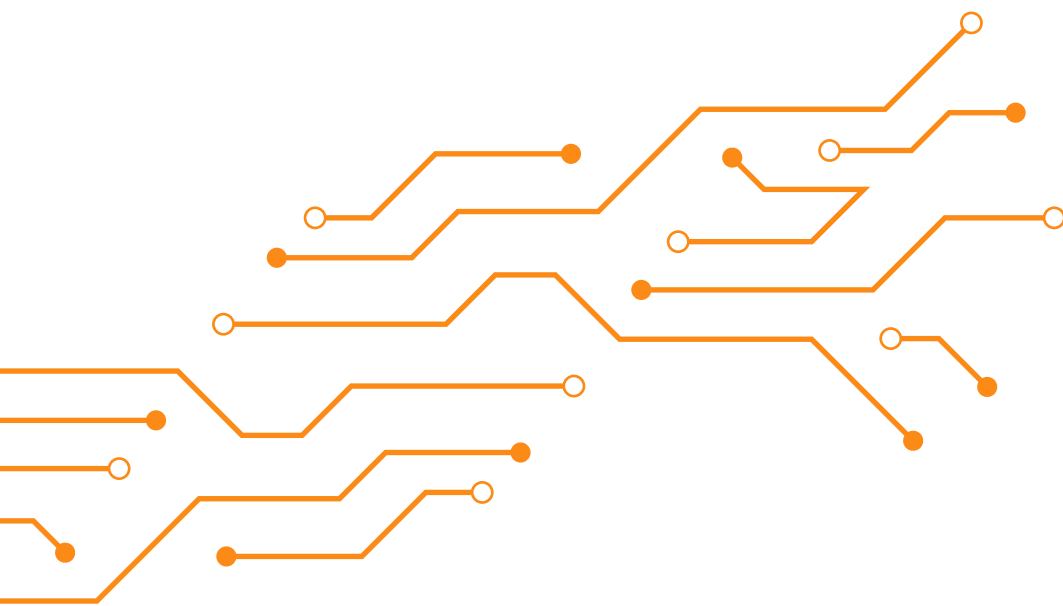


# OUR INDUSTRY PICKS 2023



In this section, you will find a collation of MYMI's handpicked companies which stand out to us as prominent MedTech companies this year that we would want to work at! The companies included are listed below:

- Cylite
- Planet Innovation
- CSL
- Leica Biosystems
- Invetech
- Accenture
- Biotronik
- Leidos
- Seer Medical
- Orion Health
- Johnson & Johnson
- Arcitecta
- Avanade
- Hydrix
- Resmed
- Anatomic
- Siemens Healthineers
- IBM
- Telstra Health
- Agilent Technologies
- Pfizer



# Working at Cylite

At Cylite, we offer a fast-paced, highly stimulating work environment. We're committed to providing the best possible workplace for maximum development and achievement of goals for all our staff. By working together and combining our expertise and knowledge, we deliver cutting-edge solutions to better health outcomes everywhere.

## Open Student Positions

Melbourne, VIC

### Production Technician - Optics, Medical Devices

Working in a collaborative environment, the Manufacturing Technician roles include detailed inspection of components, assembly of parts and testing of systems to achieve our high-quality requirements. Interested? To learn more or submit your application, get in touch with us today.



Redefine your perspective  
with Hyperparallel OCT®





# Planet Innovation

Planet Innovation is a healthtech innovation and commercialisation company that exists to create breakthrough products and commercially successful businesses that transform healthcare and have a positive impact on the world.

Planet Innovation was formed in 2009 by four globally experienced biomedical executives who implemented a 'market-pull' orientation rather than 'technology-push'. By gathering deep market insight before building the technology solutions, Planet Innovation ensures there is both a customer and a market willingness to embrace their products and businesses.

The 500+ team offers clients the full spectrum of product design, engineering and manufacturing services needed to develop and commercialise products for the diagnostics, life sciences and healthcare industries. They also make strategic investments with selected global healthtech companies to help drive commercial success and build long-term partnerships.

## Job Categories

Planet Innovation has four main teams, Design services, Digital services, Commercial services and Manufacturing teams. They also have two other divisions named the Incubator and Strategic Investments. Within these teams there are roles available in management, engineering, manufacturing, industrial design and administration.

## Company Principles

- Consider the whole journey. Start with the end in mind
- Assume nothing, let the market drive your innovation
- Resist the temptation to design while you innovate
- Align your goals. Focus on products, not projects
- Reduce risk by turning big projects in to small projects
- Re-use rather than re-invent

## Disciplines

Ideal for engineering students from Mechanical, Electronics, Mechatronics, Aerospace, Biomedical or Software, along with students studying Computer Science and Product Design disciplines.

## Locations

Head Offices in both Box Hill, Australia and California, USA. international rotations are available to our Carlsbad and Irvine offices in California.





## Ideal Characteristics

- An entrepreneurial and innovative spirit. Curious, creative, and innovative by nature. Always looking at things from a new perspective
- An individual that thrives in collaborative environments, loves bouncing ideas off others and sense making. Willing to take on any task and learn new skills and capabilities.
- Focused on building commercial acumen and deepening understanding of the business, client, and relevant industries.
- A strong oral and written communicator, who can clearly articulate ideas, actively listen and have empathy and compassion for the client
- Motivated to get things done, show initiative and take ownership of any task at hand.



**Lachlan Berry,**  
Mechatronics Engineer at Planet  
Innovation

## Programs

### Internship program

- 8 - 12 week Internship Program
- Build your engineering consulting and technical skills
- EOI open most of the year
- Role applications officially open September

### Graduate Program

- 2 - year Graduate Program
- Development program to build your engineering consulting and technical skills, learning from some of the world's best and brightest.
- Applications typically close at the start of April (Applications for 2024 Program closed 2 April this year)

**“You have the opportunity to work outside of your immediate discipline. Business development, marketing, whatever you have an appetite for. It’s something quite unique at PI and really special.”**





BASED IN PARKVILLE, BROADMEADOWS,  
NORTH MELBOURNE, AND  
VARIOUS SITES GLOBALLY

## BACKGROUND

CSL is a biopharmaceutical company, manufacturing plasma-derived and recombination therapeutic products. Its line of therapies includes products for the treatment of bleeding disorders such as haemophilia and von Willebrand Disease; primary immune deficiencies; hereditary angioedema; inherited respiratory disease; and neurological disorders. The company's products are also used in cardiac surgery, organ transplantation, burn treatment and to prevent hemolytic diseases in the newborn.

CSL Behring's parent company, CSL Limited, is headquartered in Melbourne, Victoria, Australia. As part of a global alignment, the CSL Behring brand was established in 2007. Previously known as ZLB Behring, the company's history dates back to 1904, when Behringwerke was founded in Germany by Emil von Behring, winner of the first Nobel Prize in Medicine as inventor of serum therapy or serology.

CSL Behring operates CSL Plasma, one of the world's largest plasma collection networks. It has over 12,000 employees, and more than 270 plasma collection centers covering China, the US and Europe.

## COMPANY VALUES

CSL's strong commitment to living our values has guided us for many decades. Our Values have been fundamental to our success, helping us to save lives, protect the health of people, and earn our reputation as a trusted and reliable global leader. They're at the core of how our employees interact with each other, make decisions and solve problems.

Our values are:

- Patient Focus.
- Innovation.
- Integrity.
- Collaboration.
- Superior Performance.

## PRACTICE AREAS

- Administration & Clerical
- Plasma Centers & Operations
- Communications
- Engineering
- Environmental, Health & Safety
- Facilities, Real Estate & Security
- Finance
- Human Resources
- Information Technology
- Legal & Regulatory Affairs
- Manufacturing/ Operations
- Validation & Quality
- Research, Development & Sciences
- Sales & Marketing
- Medical Affairs
- Strategy & Planning
- Business Process Excellence
- Supply Chain & Logistics

# THE CSL GRADUATE PROGRAM

The CSL (Australia) Graduate Program is a two-year program focused on providing you with career opportunities within our CSL global businesses.

This program offers the chance to work alongside and learn from a diverse group of professionals who are leaders in their field.

As a CSL Graduate you will be given:

- Tailored rotations
- Practical experience
- Real projects with real responsibilities
- On-the-job technical training
- Exposure to various teams and functions across the business
- Structured coaching and regular performance feedback
- Focused career development
- Specialist development activities

The application process (apply [here](#))

Our five-stage application process is your opportunity to show us that you have what it takes to be a CSL Graduate. Successfully advancing through every stage of the recruitment process brings you closer to becoming an important member of the CSL team.







**B I O S Y S T E M S**

## Background

Leica Biosystems is a cancer diagnostics company and a global leader in workflow solutions. Only Leica Biosystems offers the most comprehensive portfolio that spans the entire workflow from biopsy to diagnosis. With unique expertise, they are dedicated to driving innovations that connect people across radiology, pathology, surgery and oncology. Their experts are committed to delivering Improved Quality, Integrated Solutions, and Optimised Efficiencies leading to breakthrough advances in diagnostic confidence.

The Leica Biosystems mission of “Advancing Cancer Diagnostics, Improving Lives” is at the heart of their corporate culture. Leica Biosystems is headquartered in Germany and operates in over 100 countries.

## Company Values

### The best team wins.

We recruit and develop the best available talent and create highly effective teams.

### Customers talk, we listen.

We listen to the needs of our customers and provide them with the solutions they need to deliver better health outcomes for more patients.

### Continuous improvement.

We continuously improve our business practices and the products we deliver to better help our clinical and research customers perform their important work.

### Integrity and compliance.

Our commitment to integrity and compliance is the foundation of the trusting relationships we build with our customers.

## Programs and Opportunities

### Leadership Development Programs:

- General manager Development Program
- Human Resources Development Program

### Rotational Leadership Programs:

- Operations Leadership Program
- STEM iDEAS Program

During your 2.5 year long tenure at one of our 25+ global Operating Companies (OpCos), you'll accelerate your career by interacting and collaborating with some of the brightest and most innovative minds on our leadership teams in Research and Development, Science, Engineering and Technology. After further developing your technical and leadership skills, you'll be equipped with the tools and skills needed for a STEM role within your rotational Operating Company in the following areas:

- Biology & Molecular Biology
- Chemistry & Biochemistry
- Engineering (EE, CE, ME, BME)
- Computer Engineering with focus on Machine Learning/AI
- Design Engineering with focus on Human Interaction
- Computer Science / IT / Software Development / Coding

Open to Undergrad, Masters and PhD students.

### Danaher Summer Internship Program (DSIP):

The Danaher Summer Internship Program (DSIP) is a 10-12 week immersive journey where you'll learn, engage with leaders, and gain exposure to the fundamentals of the Danaher Business System (DBS)—a powerful set of shared tools that enable our associates around the world to solve complex problems and make a difference.



**Jonathan Dulce**  
**Student Electronics Engineer**  
**at Leica Biosystems**

**What projects have you been a part of at Leica?**

Throughout my time at Leica I have been part of several different projects that aren't just limited to my Engineering knowledge. I have participated in designing and manufacturing test jigs, verifying product performance and aimed to improve production processes. I have also engaged in analysing products and components for compliance to meet environmental standards. I have learnt a lot of different skills and gained knowledge at Leica.

**What do you enjoy about working at Leica?**

The best part of working at Leica is the great company culture. Everyone is welcoming and always ready to help. They are always attentive to find new learning opportunities for students and student engineers like me. The Project Management team is also run very efficiently and makes work very productive and fulfilling.

**Any advice for future graduates applying for jobs?**

Showing an enthusiasm and willingness to learn is always appreciated and welcomed. If they know you are able to adapt to a situation well, they will take a chance on you. I also find that reflecting specifically on why you wanted to be an engineer in the first place and applying that to interview responses helps to really validate why they should hire you.

# Invetech

## Background

Invetech is a global innovation and product realization partner that has been creating breakthrough products and custom automation systems for more than thirty years. As a product development consultancy, we blend creativity, commercial know-how and technical acumen to help our clients create business success. The experience we've acquired over the decades in product design, development and contract manufacturing spans a range of healthcare market sectors including laboratory diagnostics, Point of Care diagnostics, cell and advanced therapies, and life sciences. The combination of our human-centered approach, agile product development processes, strategic program management and proprietary modules are what set us apart from other product development companies. Working together with our clients, these processes, tools and principles enable us to deliver outstanding products.

## Company Values

- Innovation: We're bold and imaginative, thriving on opportunities to solve complex problems and deliver breakthrough results.
- Integrity: We value openness and honesty in the way we communicate and operate
- Enthusiasm: Our people are passionate about what we do and committed to delivering the best outcomes.
- Excellence: We hire the best people, creating a challenging and people-first culture that promotes strategic thinking, service excellence and continuous improvement.
- Collaboration: We support and learn from each other to achieve the right outcomes for our clients and our company

## Job Categories

- Oncology
- Consulting
- Manufacturing
- Product development

## Internship Opportunities

As a graduate, you will be allocated into resource groups: MID (mechanical, innovation and design), electrical, software, UX (user experience, industrial designers) or contract manufacturing. Where you will be allocated either a project or assigned as a general member of a sector (diagnostics, point of care devices or cell therapy), jumping between projects. From day one, you will be fully integrated into project teams, assisted by a buddy and mentor, to help make meaningful contributions that will impact the final product.



## Rachel Yang

Former Mechanical Engineer at Invetech  
MYMI Promotions Director (2020-2021)

### What do you enjoy about working at Invetech?

The people are what make Invetech such a great place to work. The wealth of knowledge and everyone's willingness to help in whatever way they can creates an open environment where collaboration thrives. You can really reach out to people who aren't even on your project for guidance who will happily take the time to support you. Another thing I enjoy about Invetech is the work. There is always a variety of interesting projects and tasks to learn new things from and to keep you constantly engaged. I have found in my particular role, there is a good balance of doing hands on work as well as computer based technical skills which keeps me interested all the time.

### Any advice for future graduates applying for jobs?

There are few tips I would give to future grads looking for a job:

- Make connections and network with professionals who are already where you want to be in the future. They can help you understand the path they took to get there and potentially open doorways for your future career opportunities too.
- Get your interview question STAR responses ready and use relevant technical experiences to back up your skills. I found having a pool of examples that demonstrate different valuable skills really helpful so that I could pick and choose which ones to talk about that best showed how I could bring value. It's also helpful to have some extracurricular activities or volunteering experiences related to your interests to show your initiative.
- Try and gain experiences in a wide variety of areas outside of your discipline and be open to new opportunities. I've had to use skills from various areas of engineering and science at work and having prior knowledge of software/electrical basics made it so much easier to pick up.

### What projects have you been a part of at Invetech?

There are a variety of cool projects that come through Invetech through both the diagnostics and cell therapy space. Some projects I've worked on a diagnostics machine that can perform PCR in 15 minutes, a rapid sequencing-based device that can detect the antibiotic resistance of a pathogen in a few hours, a machine that performs elutriation to aid in manufacturing autologous T cell therapies just to name a few. Apart from the devices themselves, I have also worked on contributing to the design and testing of the consumables that some of these devices use. Through my role as a Mechanical Engineer, I've had the opportunity to participate in the design and ideation phase, testing and verification, quality control, and assembly processes which has given me really good insight in many aspects of getting a device from the design phase through to manufacture.





## About Accenture

The purpose of Accenture is to deliver on the promise of technology and human ingenuity

- Professional services company with 200 locations in 50 countries, specialising in information technology services and consulting. It is the largest independent technology services provider. The company has four main organisational sectors
- Accenture Strategy and Consulting provides business strategy, technology strategy, operations strategy services, as well as technology, business and management consulting services
- Accenture Song (formerly Digital and Interactive) provides digital marketing, analytics and mobility services
- Accenture Technology focuses on technology software, implementation, delivery, and research & development, including its Technology Labs for emerging technologies
- Accenture Operations focuses on an "as-a-service" model of service delivery. This includes business process outsourcing, IT services, cloud services, and managed operations

## Company Values

**Client value creation:** Enabling clients to become high-performance businesses and creating long-term relationships by being responsive and relevant and by consistently delivering value

**One global network:** Leveraging the power of global insight, relationships, collaboration and learning to deliver exceptional service to clients wherever they do business.

**Respect for the individual:** Valuing diversity and unique contributions, fostering a trusting, open and inclusive environment and treating each person in a manner that reflects Accenture's values.

**Best people:** Attracting, developing and retaining the best talent for our business, challenging our people, demonstrating a "can-do" attitude and fostering a collaborative and supportive environment.

**Integrity:** Being ethically unyielding and honest and inspiring trust by saying what we mean, matching our behaviours to our words and taking responsibility for our actions.

**Stewardship:** Fulfilling our obligation of building a better, stronger and more durable company for future generations, protecting the Accenture brand, meeting our commitment to stakeholders, acting with an owner mentality, developing our people and helping improve communities and the global environment.

## Job Categories

Consulting, Strategy, Corporate, Digital, Technology, Operations, Cloud

## Disciplines

Cyber Security, Information Technology, Cloud, Automation, Software Engineering, Human Resources, Sales, Finance

## Locations

Melbourne VIC, Brisbane QLD, Kingston ACT, Perth WA, Barangaroo NSW

## Programs

### [Summer Internship Program](#)

In the program you work alongside their consultants on real Accenture projects where you make an impact from day one. You'll help global and local iconic brands solve their biggest problems by unleashing the power of technology and human ingenuity. Their summer internship program is competitively paid and open to students who are currently in their penultimate year of study, studying Computer Science, Information Technology or any discipline of Engineering including Software Engineering.

## Graduate Positions

At Accenture, we are innovators who look to improve the way the world works and lives. Coming from diverse backgrounds, we work together to solve our clients most challenging problems with leading-edge technologies.

With the Accenture Discovery Program, you'll get to experience what it is like to work on a project that mirrors the skills our teams have and the work they do in the real world. You'll build the skills you need in areas such as project and stakeholder management, decision-making, data interpretation, as well as user experience and process design - in short, skills that we believe will give you an edge in anything that you do, from finishing your uni work, to pursuing personal projects and launching your career.

Whether you already have an idea about how you want to use your degree, or are still feeling your way around, the Accenture Discovery Program will give you a taste of how a career with Accenture could help you make a real impact on the world around you.

*"Just a few months into my time at Accenture, I was building life-saving applications"*

Lachlan McGrath, Senior Analyst  
(Technology, Cloud first, Accenture ANZ)







# BIOTRONIK

excellence for life

At BIOTRONIK, we are committed to helping people with heart and blood vessel diseases live healthy, fulfilling lives. This immense responsibility motivates thousands of employees worldwide to develop new cardiovascular and endovascular medical technologies that physicians trust to save and improve patient lives. Our unique, safe and reliable products, including pacemakers, stents, implantable defibrillators and remote monitoring services, help patients in more than 100 countries.

## Company Values

### The Highest Quality

- We uphold the highest quality standards in everything we do, down to the last detail.

### Safety for Patients

- Saving lives and improving patients' health have been BIOTRONIK's goals from the start. Patient wellbeing is always our top priority.

### Solutions for Tomorrow

- We focus on providing solutions and creating technologies that raise the standard of care.

### Service for Patients and Physicians

- We offer unmatched educational, logistical and technical support, and strive to build long-term relationships with patients and physicians.

## Job Categories

- Engineering and Manufacturing
- IT
- Research and Development
- Quality Management and Quality Assurance
- Regulatory Affairs and Clinical Studies
- Sales and Marketing
- Purchasing, Logistics and Supply Chain Management
- Finance, Human Resources and Administration

## Locations

- Berlin, Germany
- Lake Oswego, United States
- Pymble NSW, Australia
- Wien, Austria
- Vilvoorde, Belgium
- Brazil
- Sofia, Bulgaria
- Toronto, Canada
- Finland
- Athina, Greece

## Internship Opportunities

A 3 to 6 month internship, this initial contact with the working world will let you see the workings of a technology company with an international focus from the inside. You will gather impressions and experience in everyday work and get a clearer view as to whether you want to work with us again in the future. The experience with us shall give you an accurate impression of working life at BIOTRONIK, whether in the office or manufacturing areas.

### **Eligible Disciplines**

- Electrical Engineering
- Computer Science / Computer Engineering
- Mechanical Engineering
- Physics
- Biomedical / Equipment / Precision Engineering
- Industrial Engineering
- Economics
- Medical Science, Sport Science and Sport Physiology
- CCU Nursing and ICU Nursing
- Business Studies or Administration
- Logistics and Supply Chain Management
- Finance / Human Resource

## Graduate Opportunities

By starting your career at BIOTRONIK, you open up exciting opportunities for development in an innovative company with an international focus. For your professional development, you can take advantage of individually tailored skills training and orientation programs for new employees.

We support you in your career at our company and help you realize your best potential. You will become part of our team and work on the medical technology of tomorrow: trend-setting products that are vital for people all over the world.

We look forward to receiving your application. You can apply for a specific position or submit an unsolicited application.

### **Eligible Disciplines**

- Computer Science / Computer Engineering
- Electrical Engineering / Electronics
- Mechanical Engineering
- Biomedical / Equipment / Precision Engineering / Physics
- Industrial / Communications Engineering
- Economics
- Business Studies / Administration
- Logistics and Supply Chain Management
- Finance / Human Resource



## **Claudia**

Team Lead HR Projects, Processes & Reporting

*"For me, BIOTRONIK is an innovative company that offers a variety of opportunities to develop oneself. I am fascinated by our products and the fact that they help to improve patients' quality of life. And the thing I appreciate most about BIOTRONIK is the personal contact and the good atmosphere."*

Leidos makes the world safer, healthier and more efficient through information technology, engineering and science. It's work that matters, and a mission they are passionate about. As a large scale prime systems and services integrator, Leidos turns complex data into practical, usable solutions for our customers. In practical terms, they are Australia's largest commercial supplier of intelligence services to the Australian Intelligence Community. They maintain legislative websites for governments, provide critical systems integration projects to the Department of Defence and support the IT environment for the Australian Taxation Office. We design and deliver customised solutions that support groundbreaking medical research, optimise business operations, and expedite the discovery of safe and effective medical treatments

## Company Values

- Integrity
- Inclusion
- Innovation
- Agility
- Collaboration
- Commitment

## Hilary Pong Proposal Analyst

*"As a proposal analyst, I work in the Capture Operations team. My role specifically involves*



*working on a range of different bids and looking at where Leidos sits in terms of its strategy compared to its competitors. In business development you get a lot of insight into the opportunities that we are pursuing, so I think that's really been something that I've noticed has changed a lot in the last few months."*

## Job Categories

- Analytics
- Digital Health
- Research & development
- Clinical testing
- Pharmaceutical
- Consulting
- Product development

## Disciplines

- Business & management
- IT & computer science
- Humanities, Arts & Social Sciences
- Engineering & Mathematics
- Sciences

## Locations

- Melbourne across our Scoresby, Clayton and Melbourne CBD sites
- Canberra across Kingston and Civic CBD sites

## **Australia Graduate Program**

At Leidos, as a graduate you are employed on a permanent basis and spend the first year on the graduate program enabling you to work on real projects as an embedded and productive team member right from the start. You will be surrounded by seriously smart, approachable people, so there is plenty of scope to push the boundaries, develop and learn in an environment that is challenging, supportive and constantly changing.

All of our graduates are employed on a permanent basis and work on real projects as an embedded and productive team member right from the start. We make sure our graduates are fully set up for success, by providing extra support, training and networking opportunities during the first year, along with a mentor and buddy to help you navigate around our organisation.

At the end of the year, our graduates typically continue to work in the area they started in and further develop their strengths and capabilities. Some may wish to explore other opportunities based on their aspirations and the needs of the business. After that, they often progress into technical or managerial positions. We invest heavily in our graduates ensuring they are set up for success. They are, after all, the future talent at Leidos.

### **We have the following graduate opportunities:**

- Software Engineer
- Systems Engineer
- Cyber Analyst
- Systems Administrator
- Project Coordinator
- Business Analyst
- Proposal Analyst
- Finance Analyst
- Procurement Analyst.

## **Industry Based Learning Program**

In addition to our graduate program, we also run a paid industry-based learning program for 12 months. Ideal for students in their penultimate year at university, this offers the chance to apply their course into hands-on work experience by working on real projects alongside more experienced team members.



Seer Medical is creating technology that revolutionises the diagnosis and management of neurological conditions, with a special focus on epilepsy. Our mission is to empower people by delivering personalised deep clinical insights by utilising the latest technology.

Our technology consists of wearable devices, a cloud platform and machine learning systems. These systems are at the core of our at-home video EEG monitoring and diagnostic service - the first of its kind. Seer has already made a big impact across the east coast of Australia over the last 2 years, and is now building for international expansion.

## Company Values

- Going Big
- The 4 Ps — People, Purpose, Products, and Profits
- Empowerment of People
- Ownership
- Being Bold in the Face of Uncertainty
- Let the Best Ideas Win
- Focus on the goals and not the obstacles
- Challenge the Status Quo
- Transparency

## University of Melbourne Biomedical Engineering Summer Research Program (SREP) Collaboration

This project will utilise a large, existing database of mobile seizure diaries from people with epilepsy. The objective is to use statistics and machine learning to explore how population-level trends (i.e., common daily and weekly patterns) can be used as a prior likelihood to improve individuals' forecasts. The research student will work closely with the team at Seer Medical as part of our pilot study of a mobile seizure forecasting app. The project can be undertaken via remote work. The student will be able to learn and develop skills in Python programming and gain insight into software development.

## Job Categories

- Head Office (e.g. Strategy Manager, Accounts Payable Officer, Quality Specialist, Advisor - Corporate Affairs)
- Manufacturing
- Marketing (Visual Designer)
- Product (Product Support)
- Sales
- Services (Clinical Technologist, Medical Receptionist, Cardiac Technician)
- Technology (Machine Learning Manager, Industrial Design Engineer, UX Researcher)

## Disciplines

- Electrical Engineering
- Industrial Design Engineering
- Software Engineering
- Biomedical Engineering
- Medical Service/Support Engineering

## Locations

- Australia
- United Kingdom
- United States



Orion Health is a global, award-winning provider of health information technology, advancing population health and precision medicine solutions for the delivery of care across the entire health ecosystem. Founded in 1993, Orion Health’s focus for 30 years has been on delivering software, services and support for healthcare organisations that empower clinicians and caregivers with the right information to deliver the best possible care.

They specialise in open technology systems that seamlessly integrate all forms of health and personal data across the entire health community and present that data back to users in real time to provide optimum patient care. Orion Health believes that software needs to do more than serve up data; it needs to provide insights in real time to the people who need it, when they need it. They provide a smart suite of solutions that enable clinicians to extract meaningful insights and make more accurate decisions about patient care. Delivering patient-centred healthcare and quality health outcomes that help patients live a healthier life.

## Company Values

- We exist to delight our customers
- We innovate and solve the unsolvable
- We always do the right thing
- We continually learn and grow
- We take ownership
- We get things done
- We work as one team
- We strive to be the very best

## Job Categories

### Corporate Services

- Project Manager

### Professional Services

- Implementation Consultant, Solution Architect, Technical Project Manager, Application Support Analyst

### Research and Development

- Front End Developer, Software Engineer, Data Engineer, Test Engineer, Implementation Consultant

### Sales and Marketing

- Pre Sales Technical Consultant, Digital Marketing Manager

## Disciplines

- Software Engineering
- Data Engineering
- Test Engineering
- Data Science/Analysis

## Graduate Roles

Our Graduate roles are fluid and ongoing throughout the year. Be sure to search on Seek for our Graduate opportunities. Also, make yourself known to us – if you’re in the market and we have a role, we’ll tap you!

Here at Orion Health, you have a real opportunity to grow your skillset and be exposed to the latest approaches to development, from automation to containerization and cloud servicing with AWS.

# Johnson & Johnson

## Background

Johnson and Johnson is a multinational company that develops consumer healthcare products and medical devices for healthcare professionals. Johnson and Johnson is the largest healthcare company in the world, with 140,000 employees across subsidiary offices around the globe. In Australia the Family of Companies consists of:

Johnson & Johnson Pacific Pty Ltd, known for its portfolio of leading consumer health brands and is a leading provider of health and wellbeing products to the general public.

Johnson & Johnson Medical, a medical devices business producing a range of innovative products and solutions primarily used by healthcare professionals in the fields of orthopaedics, neurological disease, vision care, diabetes care, infection prevention, cardiovascular disease, and aesthetics.

Janssen Pharmaceuticals, the pharmaceutical company addressing research in the fields of oncology, immunology, neuroscience, infectious disease, and cardiovascular and metabolic diseases. Four Janssen medicines are included in the World Health Organisation's Essential Drug list.

## Company Values

Johnson & Johnson Family of Companies in Australia receives 2017-18 'Employer of Choice for Gender Equality' citation from the Workplace Gender Equality Agency (WEGA) for the first time.

One of only 120 organisations across Australia to receive this citation in 2017-18.

Some of the company's initiatives to support gender equality include:

- An enhanced parental leave policy supporting 14 weeks paid leave for Birth mothers, 8 weeks paid Bonding Leave for partners and 8 weeks paid Adoption Leave for adoptive parents.
- Flexible working practices, coupled with extensive leave options.
- Practices that encourage gender equality in succession planning and learning and development programs.
- Supporting employees experiencing Domestic and Family Violence, with access to paid leave.
- Reviews and strategies to help ensure equal opportunity in compensation, hiring, development, and advancement.
- Attracting and retaining diverse talent.
- Building inclusive leadership competencies.

## Category of Jobs

- Oncology
- Immunology
- Data Science
- Market Access
- Vaccines
- eCommerce
- Innovation Development and Partnerships
- MedTech and Surgical Robotics





“

I was surprised by the amount of responsibility I was given, and how very senior leaders, like SVPs and product directors, valued my input and web expertise even though I was low on the totem pole. They were really willing to hear my perspective and trusted me to lead the IT side of a website launch. From there, things just started to grow.

— **Nigel Storey**, Senior Director, Chief Operating Officer of Johnson & Johnson Design speaking about his experience as a Rutgers University Inroads Intern in collaboration with Johnson & Johnson

”

## Internship Opportunities

Internships run across 10-12 weeks, with opportunities in:

- Customer Development
- Engineering
- Finance
- Human Resources
- Marketing
- Research and Development (R&D)
- Supply Chain and Operations
- Technology

Requirements:

- Be actively pursuing a bachelor’s degree or above, depending on the internship
- Have a minimum cumulative GPA of 3.0
- Demonstrate strong analytical and quantitative skills
- Possess excellent communication and presentation skills as well as leadership qualities
- Be able to handle multiple projects and initiatives while maintaining a strong sense of urgency



“

What really resonated with me throughout my internship was, instead of having an attitude of ‘what do I need to do,’ it was more ‘how can I help?’

— **Vivian Liang**, Currently member of the R&D Leadership Program speaking about her experience as an intern at Johnson & Johnson DePuy Synthes, while attending the Worcester Polytechnic Institute





# ARCITECTA®

OPERATING SYSTEMS FOR META+DATA

Arcitecta is a creative and innovative software company. It was founded in 1998 and is working towards building the world's best data management platforms.

“Over eighteen years of entrepreneurship, Mediaflux [data management platform developed by Arcitecta] has formed the foundation for managing the simplest, and the most complex data, for individuals through to large teams of people at global enterprises. Our experience in working with our customers in defining the questions they need answered has simplified data intensive workflows, and exposed pioneering ways for our partners to improve their businesses and people's lives.”

## CAReHR™

BY ARCITECTA®

### AN AGILE CLINICAL DATA MANAGEMENT SYSTEM FOR HEALTH PRACTITIONERS AND RESEARCHERS.

Healthcare organisations of all sizes are facing the same digitalisation challenges. Clinical and research data is collected, transformed, and shared across a complex ecosystem including medical research institutes, hospitals, universities and community service providers. Data management sits at the core of this transformation, and clinicians now require high quality, well-coded digital health data, in each stage of its managed lifecycle.

Mediaflux is the core of CAReHR: an advanced and flexible healthcare data solution developed by Arcitecta in collaboration with leading hospital specialists.

CAReHR makes it easier to manage complex interdisciplinary health records through a single system that clinicians can simply and intuitively navigate from anywhere on any devices.

#### Programs

- Arcitecta's Graduate Makers Program\*
- Internships Available
  - Melbourne or overseas
  - Submit CV and 30 second video with some information about yourself
  - No deadline
  - Apply online: <https://www.arcitecta.com/careers/internship/>

\*Hack2Hire challenge needs to be completed to be considered

**Disciplines/Catagories:** Software engineering, computer science, software development, information technology, Marketing, Graphic design, data systems, data management, health & research solutions (Murdoch Children's research institute, university of Melbourne, Florey neuroscience institute)



Avanade is a global services company primarily providing IT consulting, artificial intelligence, business analytics, cloud, application services, digital transformation, security and managed services offerings, with a large focus on Microsoft-based platforms. It was formed in early 2000 as a joint venture between Accenture and Microsoft and maintains an alliance to combine Accenture's consulting with Microsoft's cloud and mobile technologies.

Spanning across multiple industries, for example, banking, capital markets, energy and utilities, government, health, insurance, legal, manufacturing and retail, Avanade provides a wide range of clients with their unique services. Technologies utilised include Adobe, Microsoft 365, Microsoft Analytics and AI, Microsoft Industry Clouds, Microsoft Security and many more.

## Company Values

- Passion for technology and innovate with purpose
- Deliver with excellence
- Believe everyone counts

## Job Categories

- Technology
- Advisory
- Creative
- Sales
- Corporate

## Disciplines

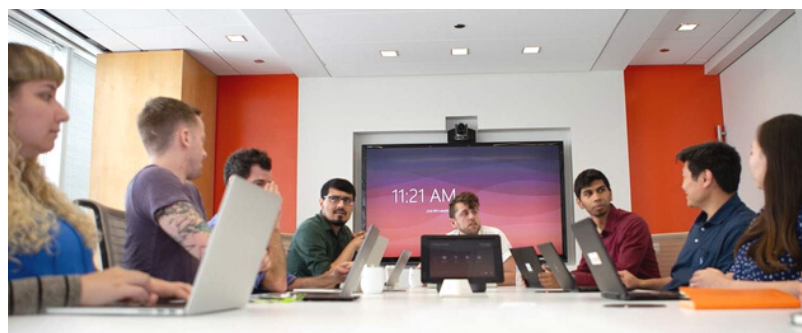
- Infrastructure and cloud engineering
- Software engineering
- Experience design
- Data analytics
- Business
- Technology integration

## Graduate Opportunities

Graduate programs are also offered to various disciplines in Australia. Opening date for applications is approximately early months of the year and the closing date is late May.

Graduates will be based Australia wide, in Melbourne, Sydney, Canberra, Brisbane, Adelaide and Perth. This is a permanent full-time opportunity, working in a Hybrid working arrangement.

Avanade careers page has a rolling list of opportunities in countries all around the world.





Hydrix is an engineering company which specialises in the design and distribution of medical devices and other products. They assist their local and global corporate clients in navigating the complex and highly regulated medical technology landscape. In particular, they invest in upcoming medical technologies and products with market potential, consequently facilitating scientific and market breakthroughs within the technology sphere. With over 200 successful projects, Hydrix is a substantial driver of technological efficacy, safety and sustainability in multiple industries. Their main areas of focus include cardiovascular technologies, medical/surgical devices, and tools within mining & defence industries. They possess expertise in product development, regulatory and clinical consulting, and technology commercialisation. Hydrix works collaboratively with each client within each venture to maximise the developmental and commercial capabilities of their products, ultimately creating value whilst benefiting the patients affected by such technologies.

## Job Categories

### Consulting

- Regulatory Consulting
- Clinical Consulting
- Reimbursement
- Consulting
- Quality Systems

### Product development

- Industrial Design, UX, HFE
- Mechanical Design
- Software Design
- Electronics Design
- Project Management
- Systems Engineering

### Technology commercialisation

- Technology Assessment
- Business Assessment
- Strategic Planning & Investment

## Disciplines

Mechanical Engineering

Science

Biomedical Science

Electrical Engineering

Software Engineering

Commerce

Hydrix HQ:30/32 Compark Cct, Mulgraive VIC 3170

Keep up to date with career opportunities here:  
<https://www.hydrix.com/about/careers-at-hydrix>



Resmed is a global leader in technological solutions to sleep and respiratory disorders such as sleep apnea, COPD and other chronic respiratory conditions. Founded in Australia in 1989, over the last 30 years it has expanded to a team of 8,000 serving clients in 140 countries. Resmed pioneers innovative solutions to empower healthier, higher-quality lives. By enabling better care, they improve quality of life, reduce the impact of chronic disease, and lower costs for consumers and healthcare systems.

## Company Values

- Committed
- Collaborative
- Expert
- Innovative
- Pioneering
- Personal

## Disciplines

- Engineering
  - Software
  - Electrical
  - Biomedical
  - Manufacturing
  - Operations/Process
- Health science
  - Medical Affairs
  - Science
  - Biomedical Science
- Commerce
  - Business
  - Finance
  - Consulting

## Job Categories

- Product development
- Customer service and support
- Sales
- Information technology
- Manufacturing and supply chain
- Business support
- Finance
- Strategy and external service
- Marketing
- Quality and regulatory affairs
- Legal and compliance
- Medical

## Internship Opportunities

Resmed offers full/part-time undergraduate internships that may span throughout the entire year, or over the summer. Under the guidance of a supervisor, interns work on real world business problems within multiple diverse departments.

Interns get the opportunity to

- Assist in the research, evaluation, development or testing of ResMed products and processes using clinical and/or engineering skills within ResMed Quality Standards.
- Work within the ResMed Quality system, standards and work within major regulatory requirements
- Apply clinical and/or engineering skills.
- Assess and communicate effectively, the impact of issues with internal customers and liaise with internal customers e.g. product development, quality assurance, regulatory affairs, manufacturing and marketing in relation to clinical issues



## Locations

US/Canada (San Diego, Chatsworth, Moreno Valley CA, Atlanta GA, Halifax), Australia (Sydney NSW), China, India, Singapore, Malaysia, Japan, Ireland



Anatomics is a medical technology company that has been manufacturing high-quality medical devices, prosthetics and software solutions since 1995. Based in Melbourne Australia, Anatomics manufactures high quality patient specific implants for global distribution and in-licenses novel technology for Australian and New Zealand distribution. We strive to be recognised as a trusted and innovative provider of quality surgical products. Our mission is to work in partnership with healthcare professionals and medical device companies to provide the highest quality surgical products. We are a company of experienced and dedicated team members who strive for better surgical outcomes by initiating internal product developments and searching the world for the latest innovations in technology to make surgical procedures more effective for our partners and more comfortable for their patients.

## Company Values

- **Quality** - The Anatomics Quality Policy serves to protect and enhance Anatomics reputation for excellence in quality manufacture and commercialisation of quality products and services
- **Innovation** - strive to enable better surgical outcomes through continuous improvement, technological innovation and collaboration to make surgical procedures more effective for our partners and patients
- **Passion**
- **Commitment**

## Internship Opportunities

Anatomics provides internship engagement opportunities to university students based on internal project availability.

## Location

Anatomics is Melbourne based, with their office in Bentleigh East, Victoria

## Job Categories

- Information Technology
- Administration/Operations
- Business Development
- Education
- Research
- Consulting
- Media and Communications/Advertising
- Product Management

## Disciplines

- Biomedical/Biomodelling Engineering
- Electrical Engineering
- Mechanical Engineering
- Production Engineering
- Hardware Engineering



Our portfolio of is at the centre of clinical decision-making and treatment pathways. Patient-centred innovation has been and always will be at the core of our company. We aspire to create better outcomes and experiences for patients no matter where they live or what they are facing. We pioneer breakthroughs in healthcare. For everyone. Everywhere. We have unique strengths in patient twinning, precision therapy as well as digital, data, and AI that set us apart and enable us to actively shape the transformation of healthcare. We will continue to build on these strengths to help fight the world's most threatening diseases: cancer, cardiovascular and neurovascular diseases, improving the quality of outcomes, and enabling access to care.

## Company Values

- We listen first
- We win together
- We learn passionately
- We step boldly
- We own it

## Job Categories

- Assurance
- Audit
- Communications
- Customer Services
- Cybersecurity
- Engineering
- Environmental Protection, Health & Safety
- Finance
- Human Resources
- Information Technology
- Internal Services
- Legal & Compliance
- Manufacturing
- Marketing
- Product Management, Portfolio & Innovation
- Project Management
- Quality Management
- Real Estate
- Research & Development
- Sales
- SCM-Procurement / Supply Chain Logistics
- Strategy

## Internship Opportunities

As an intern, you'll actively contribute and gain a wealth of insights into our business and the healthcare industry as a fully integrated member of our team. Internships can last between four weeks and several months. They are offered to high school students, college and university students, or graduates.



*"Working at Siemens Healthineers means having a great supporting team around me. I gain a lot of experience in working for a global company and find the perfect beginning to working life."*

**Elena Walter**

## Commercial Graduate Program

- The Commercial Graduate Program Australia
- 2 year graduate program in Business Operations and Finance
- 4 rotations of different business divisions over 2 years, divisions include:
  - Digitalisation
  - Logistics
  - Contract Management
  - Enterprise Services
  - Performance Controlling
  - IT
  - Service
- Upon completion of the 2-year program Graduates will be offered a permanent position in a business area that is of best fit for the Graduate and the business.

## Locations

With a presence in over 70 countries, there are jobs available globally. **38**



International Business Machines Corporation, better known as IBM, is one of the biggest technology companies in the world, with operations in more than 170 countries and over 345,000 employees worldwide. IBM is best known for producing and selling computer hardware and software, as well as cloud computing and data analytics. The company has also served as a major research and development corporation over the years, with significant inventions like the floppy disk, the hard disk drive, and the UPC barcode. IBM researchers have been awarded Nobel Prizes, Turing Awards, and other top honours for their work throughout its history.

## Company Values

We believe our strength lies in the diversity of our employees. IBM encourages creative pursuits and passions outside of work, because when IBMers can explore their curiosity, it gives all of us a new outlook on the world and its possibilities for emerging tech. Together, IBM can drive progress through meaningful innovation and action. At IBM Research, we invent things that matter. We are a community of thinkers. We make a lasting impact on our industry and the world.

## Job Categories

Project Management, Sales, Site Reliability Engineer, Software Development and Support, Technical Specialist, Architect, Consulting

## Disciplines

Financial Services, Consumer goods, Energy, Government, Retail and Telecommunications

## Locations

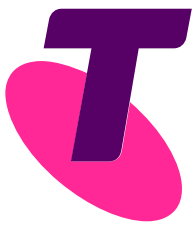
Melbourne, Ballarat, Sydney, Brisbane

## IBM Graduate Program

IBM's Graduate Program enables graduates to get up to speed quickly through accelerated professional development. The program is designed to develop IBM's next generation of business leaders who are ready to take on the changing global environment. As part of Startwise, graduates also have the opportunity to further their development through the core components of the program, including Graduate Orientation, Lunch and Learn sessions, the Inferno Graduate Competition, and the Graduate Network which acts as the social and support network for the Graduate cohort.

We encourage you to apply if you:

- Are in your final year of tertiary education OR have graduated from an Australian University no earlier than 2021,
- Have less than 2 years relevant full-time work experience,
- Maintain a credit average, and
- Are an Australian Citizen.



# Health

At Telstra Health, we work to improve lives through digitally-enabled care for our community. Our purpose drives us as we strive to realise a connected and improved digital health experience for all. By providing

software products, solutions and platforms, we work with care providers in the hospital, health service, pharmacy, and aged and disability care sectors to connect health information, clinicians and consumers. Our clinical and administrative systems, health data analytics, population health solutions, and information exchange platforms help providers to improve the quality, safety and efficiency of the healthcare they deliver. We also help enable clinicians to deliver care in new ways through our telehealth and consumer solutions.



## Company Values

- We are changemakers
- We are better together
- We care
- We make it simple

## Job Categories

- Clinicians
- Health Information Managers
- Expert Software Developers & Solution Architects
- Biostatisticians
- Epidemiologists
- Health Policy experts
- Health Information Managers
- Health Tech Specialists

## Disciplines

- Software Engineering
- Data & Statistics
- Analysis
- Medical

## Location

Melbourne CBD, Australia

## Telstra Health Graduate Program

Our 14-month Graduate Program will launch your career, and together we'll imagine what's possible in the future. Whether you apply for a technical or corporate graduate role, you'll support the cutting edge work we're doing in areas such as Internet of Things (IoT), Software Defined Networks, 5G, cyber security, drone technology, Artificial Intelligence (AI), and other emerging technologies.

As a Telstra Health graduate, you will be able to collaborate with the best people in their field and have the knowledge that your ideas will always be welcome. Plus, you'll get the tools and flexibility to help you thrive, your way.





Agilent is a leader in life sciences, diagnostics and applied chemical markets. The company provides laboratories worldwide with instruments, services, consumables, applications and expertise, enabling customers to gain the insights they seek. Agilent's expertise and trusted collaboration give them the highest confidence in our solutions.

## Company Values

### Environmental, Social, and Governance (ESG)

- Corporate mission to advance quality of life
- Address interconnections between business and needs of society and risks to planet
- Committed to improving own operations
- Evolve new products and services
- Helping customers achieve environmental goals

### Diversity

- Diversity is about recognising and honouring all dimensions of employee identity
- Connection and inclusion
- Drive strategies, initiatives, and programming that empowers employees to be successful

## Job Categories

- Food
- Environmental and Forensics
- Pharmaceuticals
- Chemical and Energy
- Research

## Locations

- Asia Pacific
- Americas
- Europe

## Opportunities

### Learning Products Internship

#### Full-time

#### Qualifications

- Completion of 2nd or 3rd year at an accredited 4-year university required in Sciences or Engineering.
- Adequate Interpersonal skills -- building working relationships, flexibility, assertiveness
- Highly self-regulated and motivated
- Excellent communication skills -- written and oral
- Willingness to learn quickly and autonomously

As an Intern, you will apply your 2nd or 3rd year Bachelor of Science or Engineering coursework to a variety of focused hands-on projects. At the same time, you will gain and apply knowledge about Agilent's industry, infrastructure and products in your assignment. This is developing real world experience in a company that is a leader in the markets it serves.

### Product Support Engineer

#### Full-time

#### Qualifications

- Bachelor of Engineering – Mechanical or Electrical/Electronics
- Strong evidence of customer focus, customer advocacy orientation
- Basic Product knowledge – broader knowledge more important than in-depth
- Willingness to learn quickly and autonomously
- Interpersonal skills – building working relationships beyond the function
- Communication skills – written and oral
- Self-regulated and highly motivated



Pfizer has established itself as one of the world's leading biopharmaceutical companies. It has become one of the most reputable producers of well-known medicines, vaccines and therapeutics, as a company dedicated to making breakthroughs to change the lives of consumers and patients. To best meet the needs of patients, Pfizer contributes to policy discussions across a wide range of related areas, including the access to medicines, efficacy and safety of medicines, prevention, and important health priorities (such as antimicrobial resistance and emerging areas of science including gene therapy).

## Company Values

- Courage
- Excellence
- Equity
- Joy



## Disciplines

- Engineering
- Executive and leadership
  - Policy and public affairs
  - Human resources and people experience
- Manufacturing
  - Biopharma operations
- Medical and clinical
  - Inflammation and immunology
  - Oncology
  - Rare disease
  - Vaccines
- Sales and commercial
  - Market access
  - Business finance and cluster finance
- Trade operations
- Legal

## Locations

Pfizer products are used in hospitals and pharmacies across Australia. They have manufacturing facilities in Melbourne and Perth, and have established collaborative relationships with research and academic institutions.

### Offices in Australia

#### Sydney

Level 15-18, 151 Clarence Street  
Sydney NSW 2000

#### Melbourne

Mezzanine Level 1, East Podium, 525  
Collins St, Melbourne VIC

#### Manufacturing Melbourne

1-23 Lexia Place  
Mulgrave VIC 3170

#### Perth

15 Brodie-Hall Drive  
Bentley WA 6102



# FYP OPPORTUNITIES

## What is an FYP?

After completing all third year units, all undergraduate engineering students will undertake ENG4701 and ENG4702, which requires students to undergo an individual or group self-guided, learning task in the form of a project. These units can be started in either semester and will integrate and build on content from earlier stages of the course. Project allocation and registration runs between the end of the exam period until the beginning of week 1 of the semester.

## Who can you do an FYP with?

At the Clayton campus, projects can be done individually or in groups and the number of students in a project is decided by the academic supervisor. If students wish to be assigned to a project with a particular teammate, it is best to notify the academic supervisor and set up a pre-agreed project. At the Malaysia campus, projects can only be completed individually.

## Types of FYP Projects

There are generally two types of projects that students can choose from - pre-agreed projects, and preference entry projects.

### Preference Entry Projects

Preference entry projects involve students applying for projects that are listed by academics on the FYP portal and ranking them by preference. Projects are open to all students that meet the application criteria, but academics are able to put in preferences for certain students in their projects. Note that students can apply for projects from any branch of engineering but they must meet application prerequisites. Project allocation is based on an algorithm that matches students with supervisors based on ranking, therefore to increase the chances of obtaining first preferences, it is best to contact the academic running project and discuss the project with them.

### Pre-agreed projects

This type of project is one that is arranged between a student and an academic supervisor. Pre-agreed projects can consist of:

- Student proposed projects
- Industry based projects
- Projects from summer research projects
- Projects from student teams, such as MYMI



## Industry Based Projects

Industry based projects involve completing your FYP with an external company. The department doesn't usually assist students with connecting to industry partners, so students are required to contact independently. However, some lecturers may have links and may advertise in their offered FYP projects companies that have directly contacted the department. The most common way to find an industry based FYP is through previous work experience with a company.

### Applying to pre-agreed project

1. Students need to find and approach an academic supervisor. If the project is industry based, then individuals will need to seek a qualified engineer at the company they are doing their FYP with to act as Industry Supervisor and get approval from their manager.
2. Students need to present details of the proposed project to academics, so that they are able to assess viability of the project.
3. If the academic is satisfied that the project is suitable and is willing to supervise, students need to obtain written confirmation from the supervisor and also request that they create a pre-agreed project ID in the FYP website. Make sure to put this ID as first preference before the application deadline.

### Applying for preference entry project

1. Visit portal for FYPs at <https://fyp.eng.monash.edu/> and sign in using Monash login
2. There is a list of FYPs available on the website. Students are able to add up to 7 of the FYP project IDs they are interested in, into their preference lists. Ensure that application statements and supporting documents for every project applied for, are added before the deadline. Project allocation & registration run between end of exam period and before week 1 of semester but students should make sure to select projects by deadlines posted on FYP portal.

## Assessment Overview

Over the course of an FYP, students will complete a Project Proposal, Progress Report, Poster, Poster Video, and a Final Report. There are two categories of FYP projects that the assessment rubric asks students to choose from for their FYP Proposal, Progress Report and Final Report:

1. Design and build / industry project: Based off a client with aims to fulfil
2. Research project: answering a research hypothesis.

Each submission builds off previous submission, such that parts will be transferred with fairly minimal adjustment to content. All assessments are standardised across all specialisations and can be marked by any academic of any specialisation, therefore it is important to be accessible and intelligible in the reports. Students are expected to spend around 12 hours a week on their projects and keep a weekly log of their progress in the FYP Moodle Page.

## Past Project Testimonials

### Testimonial from Kate Dowsley (Engagement Director of MYMI)

My FYP was working on the design of a heart pump at the CREATE lab with Dr Shaun Gregory as my supervisor. This involved 3D modelling and a lot of bench top testing and analysis. I came to do this FYP because I am passionate about the intersection of medicine/healthcare and engineering and I want to have a career in MedTech. I studied a Bachelor of Mechatronics Engineering with a minor in physiology.

Doing a MedTech based FYP at the CREATE lab was a pivotal experience in my education as it helped me realise that I want to pursue a PhD focussed on developing a medical device, which I will be starting later this year.

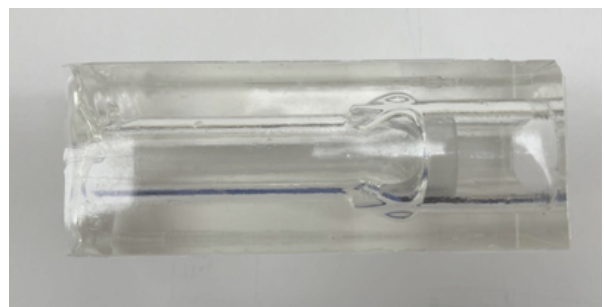
### Testimonial from Claudia Yuan

My FYP involves designing and building components for testing the hydrodynamic performance of a novel prosthetic tri-leaflet heart valve, in a left-heart cardiovascular simulator. My project is based at the CREATElab at the Baker Heart and Diabetes Institute, supervised by A/Prof Shaun Gregory. I'm also well-supported by one of Shaun's PhD candidates, who is also an experienced cardiologist.

I've always had a strong interest in medicine and healthcare, in addition to medtech and engineering. When I first heard about the work that CREATElab does, I figured it was right up my alley of Mechanical Engineering/Biomedical Science double degree. Not only does it align with my passions and interests, it also excites me that the innovative nature of the work is highly translatable into clinical settings, and able to make a real impact. I couldn't have thought of a more fitting project than what I'm currently doing!

Throughout the project, I've been able to immerse myself in the way of thinking in the medical engineering field - from the engineering mechanisms, to the physiological considerations. In my future career, I'm keen to continue working in a field that involves integrating these concepts to produce innovative and impactful outcomes - whether it be more fast-paced medtech consulting, research and development or even a PhD!

Here's a picture of an aortic root that I moulded with silicone which the valve will be housed in and integrated into the cardiovascular simulator



### Testimonial from Sophia Maisey

I am in my first semester of the FYP working with Andrew Rodda, a Monash senior research fellow, and design engineering from Johnson & Johnson (J&J) medical devices branch. We are researching if there are possible solutions to bring materials used for medical procedures and settings back into our economy for recycling or reuse. The project is titled 'Diversion of stainless steel single-use-devices in medical settings for recycling back to the raw material economy'.



I have always been interested in reducing society impact on the planet, and resource recovery is a very big way in which we can have an impact. Initially, I wasn't really aware of many other initiatives happening on campus other than the Precious Plastic Monash Team, so I reached out to Andrew who got in touch with the J&J medical device team, who are currently trying to implement sustainability initiatives for their apparatus through a 'We Sustain' campaign. Medical devices is a very large and diverse class of materials, so this project headed in the direction of stainless steel products, for which recycling processes already exist and are very valued! It has been interesting to find out whether it is these devices' instructions themselves that are seeing limited recycling rates, or whether it is current waste management systems and its stakeholders who are required to see change.

J&J in New Zealand is currently running a pilot program for diversion of stainless steel from general clinical waste, and I hope through this project a similar pilot can be designed for existing Australian hospital and waste services infrastructure.

This project is just the start of my journey into infrastructure/management techniques and engineering product design work for long term resource recovery and circular economy initiatives. Hospitals and other clinical settings will pose a great challenge in the years to come, due to extensive legislation and licensing around appropriate disposal of hospital waste, so working in this area throughout the future would be very exciting and rewarding.

I think the biggest impact this project has had on my future work is to demonstrate that engineering problems are not always technical and object designed focused - people, society and the way we run infrastructure or systems can also be improved and optimised, and I think this line of engineering can make a really important impact on the world!

## Conducting an FYP with MYMI

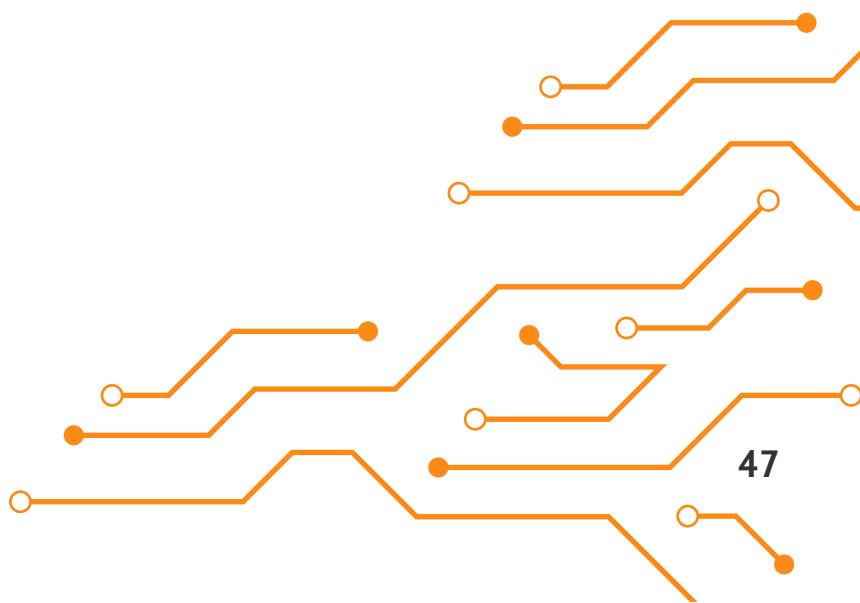
Students are able to conduct an FYP with MYMI by applying through the FYP portal or contacting Dr. Andrew Rodda to express their interest and discuss potential topics, which will be determined based on the individual's goals as well as the team's needs. Students that are interested should either be a member of MYMI or willing to join the team, and be based in Clayton campus. FYPs are possible on pre-existing MYMI projects, or in exceptional circumstances, students can also apply to undertake an FYP with their own separate proposal. A "pre-arranged" project will then be created with the student and a supervisor (usually Dr. Andrew Rodda, but may be subject to change)

Students can also conduct an FYP with MYMI through completing the Healthcare Innovation Summer Scholarship (HISS) program, which is a 12 week long summer research program run by MYMI, Monash Institute of Medical Engineering, and Monash Partners Academic Health Science Centre wherein students work alongside clinicians on a research project. Students entering their final year of study following the program then have the option to continue their HISS project as an FYP.

Opportunities are available for students studying Aerospace, Biomedical, Chemical, Civil, Electrical and Computer Systems, Environmental, Materials, Mechanical, Robotics and Mechatronics, and Resource engineering, with the primary research area for the FYP being Biomedical engineering. The chosen project can cover a diverse range of topics, and will generally focus on the development and translation of technology into clinical practice rather than developing new technology. This FYP opportunity with MYMI is limited to one student position.



MONASH  
YOUNG  
MEDTECH  
INNOVATORS





## Testimonial from Bryan Chong

Hear from Bryan Chong, who is currently doing his mechanical engineering FYP with MYMI! Bryan's FYP supervisors included Dr Jason Brenker and Dr Andrew Rodda, whom he communicated with if he had queries or concerns regarding his project.



My FYP is a project that I worked on during the HISS program of 2021-2022. There wasn't really a complicated application procedure to continue my project as an FYP. In fact, during one of the periodic check-ins with the academic supervisors of HISS, Dr Jason Brenker and Dr Andrew Rodda, they asked me if I'd like to continue my HISS project as my FYP and I decided to do so. I then chose "Project with MYMI" as my first preference in the FYP selection process and the rest is history.

I actually like that I'm choosing to continue my HISS project as my FYP. The 3-month long HISS program really allowed me to understand the details and nature of my project. Furthermore, when writing reports for the FYP program, most of the research pertaining to my project was already done during HISS, so it made my in-semester workload less burdensome.

My project's goal is to develop a novel laryngoscope to improve clinical outcomes in difficult intubations. By the end of the HISS program, a 3D model of the laryngoscope was generated, and a 3D printed prototype was created. From then on, my FYP is centred around refining one of the features of my laryngoscope. This involved more research and a lot of computational fluid dynamics simulations. I then plan on 3D printing the refined laryngoscope and conducting physical testing on trachea models.

## Creating your own FYP

Students are able to formulate their own idea for an FYP to undertake individually or in a group. It comes down to if a supervisor is happy to approve and undertake the project (related to their expertise and feasible as a student FYP project). The following steps are a guide to how one may wish to approach finding and securing a supervisor to undergo an FYP formulated by yourself.

Before approaching a supervisor with this request, be sure to flesh out your idea and pitch yourself as the right person for the job. Supervisors may ask for your non-official academic transcript, so speaking to your strengths or where you want to develop ought to reflect your past transcript.

### About you

- What are your skills
- What skills are you hoping to develop
- What is your career trajectory and how will this project aid in reaching your goals
- What personal interest do you have in this project
- How does this intersect with the supervisor's background - i.e. how can they help you reach your goals and what interest may they have in seeing this project through

### About the project you are proposing

- 1-2 page synopsis of aims of project and resources required
- Why is this an important contribution to the field
- A brief overview indicating the scope and mark clearly how it is feasibly achieved in the year
- Leave the door open to adapt and modify it based on the advice of who you are reaching out to. Show you are open to feedback and guidance by them

For a potential list of appropriate supervisors see the section on [Biomedical Engineering Supervisors](#) for a compilation on Clayton based supervisors categorised into the different engineering specialisations. Note that in conducting an FYP you are not required to choose a project or a supervisor from your elected specialisation. This means a mechanical engineering student may have an FYP supervisor from the materials engineering faculty.

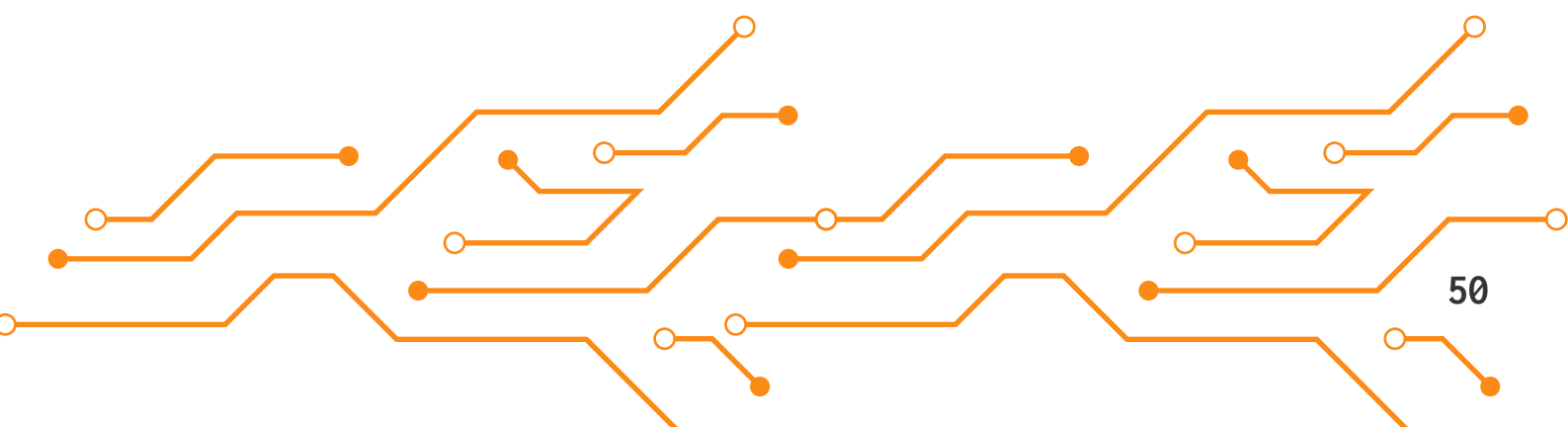


Before approaching and securing a supervisor, it is extremely helpful (but not necessary) to have an existing relationship or to be acquainted with them. This can be achieved by being more present and involved in a class that they run - asking questions during a lab, staying back to ask them further questions about their own research, etc. It is also wise to research their body of work and look at their past publications to understand their interests and demonstrate that the work you want to conduct intersects with them. If you do have a relationship with an academic but they are not exactly a right fit to be your supervisor, reach out to them if they have suggestions. If they are generous, maybe they'll even recommend you to them!

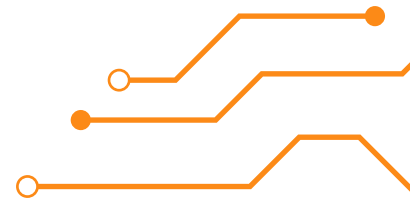
Once you are ready to contact a supervisor, do so either via email or briefly in person if there is an appropriate time (office hours, after class). Keep this first contact brief as they are likely busy. Introduce yourself and a concise synopsis of your project and end with a 'call to action' requesting feedback or a discussion, preferably in person or via a video call.

If you have agreed to conduct the FYP with that supervisor, request from them a project ID code that you can submit come preference time - usually during the exam period of the semester before you start the FYP (e.g. semester 2 exam period 2023 for FYP beginning semester 1, 2024). Submit this project ID as your first preference when the fyp portal opens to submit preferences for conducting an fyp.

A potential concern you may have with conducting your FYP is considerations for how the assessment will work, given that it was self defined. Every FYP has the same rubric and assessment criteria that essentially boils down to how you explain the aims and objectives of the project, why it is feasible and how it was fulfilled/adjusted. For more information see the Introduction for this FYP Opportunities section as assessment advice is generally applicable. Keep in a continuous open dialogue with your supervisor who can ensure you remain within a feasible scope for the completion of the project within the year allocated.



# PhD/MASTERS PROJECTS



## Masters

At Monash University, ranked #1 in Australia, there is a Master of Biological Engineering specialisation that is suitable for new graduates, professionals and managers who want to develop advanced theoretical and applied knowledge in biological engineering. This specialisation is especially relevant to Chemical and Materials Engineering students. It will allow you to gain expertise in engineering processes which utilise biology to transform materials. This includes biopharmaceutical production, microbial water treatment, fermentation and other advanced biotechnologies. This course encompasses both fundamentals and the latests developments in these fields.

At The University of Melbourne, the Master of Biomedical Engineering is available to both domestic and international students at Parkville campus. Respectively, it is 3 years full-time or 2 years full-time for students with or without a Bachelor of Engineering. This degree provides opportunities to learn specialist skills required to create new medical treatments, instruments and devices with guidance from academics who have experience working on ground-breaking innovations in medical bionics, human movement, prosthetics and tissue engineering.

## PHD

When selecting a PhD project, it is essential to find a lab that interests you and aligns with your values and career pathways. To do this, you can speak to prospective supervisors about their projects and obtain insight from current PhD students. Applying for a PhD typically requires you to attach your CV and provide descriptions of your prior research output and experience. You will also need to draft a project outline which is to be done in conjunction with your supervisor. Please note that the application process and deadlines differ across universities. When beginning your PhD journey, the most important thing to consider is your supervisor. A good supervisor will provide guidance and help you refine your project.

### Questions to ask when selecting your PhD supervisor:

- Do your values align with them? Are you passionate about similar things?
- What have other students said about them in their reviews or recommendations?
- What stage of their career are they in?
- What knowledge can they pass onto you?
- Do they have connections in their industry or research area you intend to enter?
- What opportunities will be available to you by working with this lab or supervisor? This can include industry internships and international conferences.

# LAB SPOTLIGHTS: Monash University

## **Monash University Human-Centred AI Lab**

Using human-centred artificial intelligence (HCAI) – a multidisciplinary fusion of social and/or cognitive sciences, human-centred systems, AI and multi-modal signal processing – their lab advances applications in domains such as healthcare, psychology, and education while focusing on the development and improvement of human-centered AI interactions. Their ‘Monitoring health and wellbeing of seniors using unintrusive sensors’ project aims to develop a personalised in-home monitoring system that detects instantaneous adverse events, such as falls, and decides how to communicate with seniors and carers to deliver information and alerts.

## **Inclusive Technologies Lab → Kirsten Ellis**

Led by an interdisciplinary team of researchers, the Inclusive Technologies Lab is known for its innovative, community-driven research. The lab explores how emerging technologies can be used to improve the lives of people living with disability – while empowering their families and educators. Ongoing projects include ‘3D Printed Maps to Support Orientation and Mobility’. Working with their community collaborators, they are producing 3D printed tactile maps for real-world use to assist people who are blind or have severe low vision, exploring their advantages and developing guidelines for their design. Similarly, their ‘Creating Accessible Gallery Experiences’ project explores a range of technologies such as 3D printing,

3D modelling and scanning, laser cutting, interactive labelling and refreshable tactile displays to create a multimodal art gallery experience.

## **Monash University Action Lab**

Focusing on innovation in human-computer interaction, the Action Lab conducts real-world research with communities, NGOs and government bodies. Configured for impact, the Lab strives to use digital technologies to transform the roles citizens play in the design and delivery of health and wellbeing, education and media initiatives. They have various projects that range from developing COVID communication strategies for CALD communities, supporting youth mental health through COVID and promoting immunisation in Malaysia.

## **Emerging Technologies Research Lab**

The Emerging Technologies Research Lab is an interdisciplinary and internationally embedded research lab which conducts research into the social, cultural and experiential dimensions of the design, use and futures of new and emerging technologies. The lab’s key research programs are energy futures; future mobilities, automation, future health, future shared spaces and ethnographic futures. For instance, their ‘Mobility and Accessibility for Children and Adults’ project aims to conduct human centred research into understanding the transport needs for children with disabilities to assist in their support of safe transport.



### **CREATElab**

The CREATElab (Cardio-Respiratory Engineering And TEchnology laboratory) is a collaborative research space linking medical professionals with engineers to develop novel solutions for cardiovascular and respiratory diseases. Formed from a collaboration between Monash University, Alfred Health and the Baker Heart and Diabetes Institute, the CREATElab is an ideal platform to address clinically-relevant problems through engineering solutions.

The CREATElab offers a number of research projects designed for students, and can be tailored for undergraduate, honours or postgraduate levels of study. Postdoctoral research fellowships are also available through CREATElab. Research projects in the CREATElab focus primarily on mechanical circulatory and respiratory support systems including ventricular assist devices (VADs) and extracorporeal membrane oxygenation (ECMO). Prototype development is completed on site using a range of 3D printers, moulding facilities and mechanical workshop, while complex manufacturing is completed through the extensive resources of Monash University.

### **The MSD Robotics Lab**

The MSD Robotics Lab is an advanced experimental fabrication facility within the Melbourne School of Design at the University of Melbourne. The MSD Robotics Lab uses a project-based model to develop research capabilities around the application of robots to Architecture and Construction.

The Lab also assists in the translation of these capabilities to teaching and learning. Their capabilities include clay 3D printing, robotic milling, plastic extrusion and electronics.

### **Monash Vision Group**

Monash Vision Group (MVG) is a Melbourne-based collaborative partnership between Monash University and Alfred Health. Their flagship project is to develop a clinically viable cortical vision prosthesis - known as the Gennaris bionic vision system or 'Gennaris'. Gennaris has been designed to bypass damage to the eye and optic nerve, to restore functional vision to people who have lost their sight through traumatic injury and conditions such as glaucoma and acquired retinal disease. The core technology under development by MVG involves a wireless implant that is designed to deliver patterned electrical stimulation to the brain. The technology has been developed in partnership with local engineering companies Grey Innovation and MiniFAB.

MVG is always accepting applications for Final Year Projects, summer internships, PhD and B.Med.Sci projects, with the aim of helping the next generation of biomedical engineers, clinicians and researchers develop the implantable medical devices of the future. If you are an undergraduate studying Electrical Engineering, Mechanical Engineering, Materials Engineering, Biomedicine or Medicine, then they have projects that may suit your interest.

# LAB SPOTLIGHTS: University of Melbourne

## AI and Autonomy Lab

The A.I. and Autonomy Lab is based in the Department of Computing and Information Systems. They develop innovative approaches to high-level cognitive reasoning, such as performing collaborative tasks, assessing the cognitive states of other agents, and human-agent interaction. Their methods are being applied in areas such as scheduling in mine operations, disaster management, and health.

## Spatial@Melbourne

The University of Melbourne is home to an enormous collective expertise in spatial information, ranging from sensing through data management, analysis, decision making and visualisation and application. The Spatial@Melbourne initiative brings the groups and individuals at the University of Melbourne active in spatial research, teaching and engagement together in this virtual home.

Their 'Improving equity of Hepatitis B treatment access and outcomes by informing spatial targeting of resources' project developed innovative statistical and modelling approaches to augment existing surveillance data gathered to assess the impact of treatments with demonstrated efficacy against liver cancer and death, using recent methodological advances in spatio-temporal statistical models accounting for effects of mobility and demographic structure.



# LAB SPOTLIGHTS: RMIT

**Kate Fox and Ahmed**

## **Advanced Manufacturing Precinct**

The Advanced Manufacturing Precinct combines RMIT's expertise in technology and design innovation. Housing some of the most advanced manufacturing technologies available, the Advanced Manufacturing Precinct brings design and engineering together, from digital design to digital manufacturing. They focus in particular on 3D printing of advanced high value add products and components.

Their flagship project 'Just-in-time 3D Printed Implants' uses additive manufacturing and robotics to create personalised implants. The project aims to improve bone cancer patient outcomes through state-of-the-art image guided navigation, robotic excision and 3D printed patient-specific lattice implants. RMIT is developing new methods for assisting the surgeon during removal of bone tumours, including the development and evaluation of high accuracy, safety-optimized surgical robots and novel cutting technologies. The project also aims to advance and commercialise design technology developed and patented by RMIT researchers.

## **MicroNano Research Facility**

The Micro Nano Research Facility (MNRF) brings together diverse and high quality multidisciplinary micro and nano technology research into a single hub. The MNRF has comprehensive facilities for the design, modelling, fabrication, packaging, and characterisation of micro and nano scale devices.

At this testing lab, researchers have developed high-tech gas sensing capsules that can send data from inside the gut directly to a mobile phone, opening new possibilities for diagnosis, treatment and health analysis. This technology measures the concentration of selected intestinal gases through a swallowable capsule with a built-in gas sensor, microprocessor and wireless high-frequency transmitter.

# LAB SPOTLIGHTS: Swinburne University of Technology

## Swinburne Neuroimaging

This specialist facility is open to all Australian researchers and enables them to tackle today's most pressing brain-related research questions. This Neuroimaging facility is the sole single-site human imaging facility in Australia and New Zealand to offer magnetoencephalography (MEG) and magnetic resonance imaging (MRI).

The facility also supports research that probes the rapid dynamics of human brain function and underpins behaviour, cognitive development and mental health across the lifespan. More specifically, through the facility's MEG equipment, researchers are able to measure the brain at the speed at which neural activity occurs – that's in the order of milliseconds.

## Digital Innovation Lab

The Digital Innovation Lab (DIL) is at the forefront of research translation integrating current and future digital technologies in the health, manufacturing, agriculture, social science and smart cities domains. The lab offers research translation leading to innovation and impact, experimentation with best of class digital technologies, software engineering practices and methodologies, an innovative ecosystem for building rapid prototypes to bring new solution to life, and a forum for bringing together industry partners and university researchers to enable co-creation of novel digital-enabled solutions.

One of the DIL's specialised research project areas include Digital Health, which is improving patient experience, wellbeing, healthcare decision and delivery via digital technologies and solutions.

# LAB SPOTLIGHTS: University of New South Wales and University of Queensland

## UNSW

The UNSW is ranked within one of the world's top 50 universities. Their EPICentre (Expanded Perception & Interaction Centre) undertakes visualisation research in the fields of art, design, science, medicine and engineering. The Centre's potential applications and impact across mental health research, simulations, science advancements and science engagement are immense, through the incorporation of interactive 3D environments. They have targeted medical issues such as dementia, psychosis, memory loss and other neurological conditions, providing both researchers and the public with a powerful way of understanding the experience of sufferers, through immersion in the condition.

Michael Stevens and Nigel Lovell have substantial expertise in the medical engineering areas. A notable project that Michael Stevens has worked on is testing and improving implantable heart pumps, whereby algorithms are developed to automatically adjust heart pumps to respond to changes in patient state. This was successfully tested in over 600 different simulated patient scenarios in-silico and in-vitro.

## The University of Queensland

The University of Queensland are the number 1 recipients of ARC Fellowships and Awards nationally, taking pride in the fact that 100% of their research is at or above world standard, and they are ranked 38 for Performance Ranking of Scientific Papers for World Universities 2021. The University has demonstrated expertise in research areas such as medicine, allied health, neuroscience, biomedical engineering, materials science, and nanotechnology. There are even recent research developments at the University into robotic and AI-enabled prostheses for upper limb and hand rehabilitation, a new magnetic bionic ear, and an AI-enabled pancreas.

The University also has dedicated institutes to different research areas. For example, the Queensland Brain Institute is central in advancing a wide range of neural-enabled devices and neurobionic treatments for chronic and degenerative diseases e.g., Parkinson's disease, MND, MS, Alzheimer's disease and other forms of dementia. The Herston Biofabrication Institute also engages in pivotal work to deliver personalised bone implants, biofabricated organs, tissue engineered vascular grafts, cartilage and ligaments.



# OVERSEAS OPPORTUNITIES

Outside of Australia there are plenty more options for exchange programs, postgraduate study, PhDs or a research career. The following list collates some of the best MedTech focused universities overseas.



## University of Auckland, New Zealand

Keynote research includes creating an electric heart pump to provide life support for heart failure, and custom-made implantable light modules to manipulate neural activity.



## Harvard College USA

Harvard has led prolific and extensive research into specialised Bioengineering areas such as Bioinspired Robots and Computing, Biomechanics and Motor Control, and Cell and Tissue Engineering, Biomaterials, and Therapeutics.



## Massachusetts Institute of Technology, USA

A research focused university, with more than 85% of undergraduates participating in the Undergraduate Research Opportunities Program. Biomedical Engineering PhD programs are typically 5-6 years in length.



## University of Surrey, UK

Biomedical engineering courses explore a broad curriculum that includes human movement, biosensors, prosthesis design, biomedical signal processing and implant technology.



# MYMI OPPORTUNITIES



## PROJECTS

MYMI offers the opportunity to work in diverse teams on one of our many projects. You'll be able to apply the skills and knowledge you've gained from university to solve real problems brought in by clinicians.

If you're interested in any of the projects or have any questions feel free to send them to [projects@mymi.org.au](mailto:projects@mymi.org.au).

## HEALTHCARE INNOVATION SUMMER SCHOLARSHIP (HISS)

The healthcare innovation summer scholarship (HISS) is a partnership between MYMI, Monash Institute of Medical Engineering (MIME) and Monash Partners. The 12-week program takes students through a crash course in developing healthcare technology and connects students with clinicians who seek technological solutions to health problems. Students and clinicians work together to evaluate concepts for new technologies and create proof-of-concepts for real world problems.

## ARTIFICIAL HEART COMPETITION

Developed by MYMI, with support from the International Society for Mechanical Circulatory Support (ISMCS), HeartHack's vision is to connect interdisciplinary teams of students to cardiovascular design through a year-long competition to design and implement a viable total artificial heart.

## MEDHACK

MedHack is Melbourne's premier student run Healthcare Innovation hackathon. Every year, we bring students together at the intersection of design, engineering, healthcare and entrepreneurship in a 48 hour sprint to help reimagine the future of healthcare.

## COMMITTEE POSITIONS

MYMI recruit at the beginning of each year. Keep an eye on social media for updates on applications and available positions!

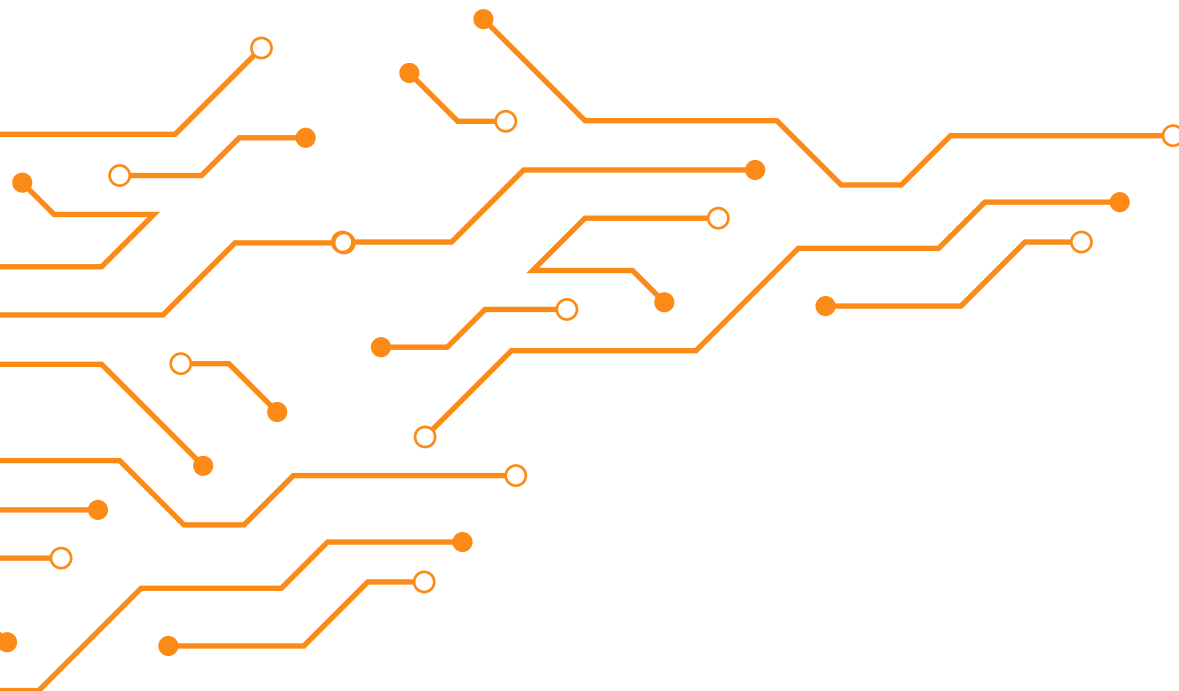


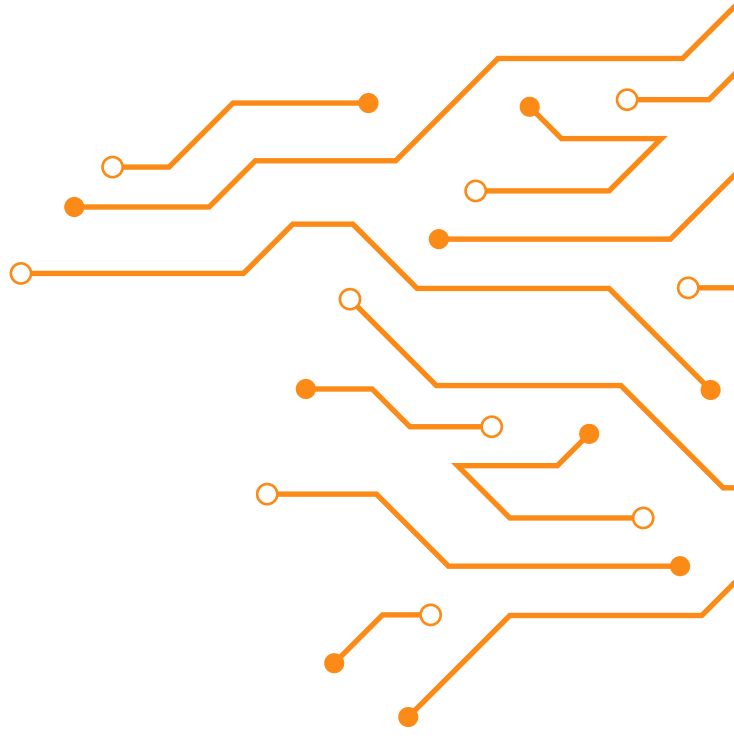
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# CLOSING STATEMENTS

Once again, we at MYMI thank you for being part of our Monash Young MedTech Innovator ecosystem and utilising our Industry Guide. To connect students to industry has been a core part of our mission since we began in 2018 and we hope that this guide helps achieve this goal.

We look forward to engaging with you at future MYMI events, and within the MYMI community. Please do not hesitate to get in touch with MYMI with any questions. We wish you the best of luck in all your future endeavours!









# MYMI INDUSTRY GUIDE 2023



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