MONASH University

MONASH INFORMATION TECHNOLOGY

PARTNERSHIP PROSPECTUS

Transform tomorrow together

MEMBERS OF

acs

TechCouncil of Australia

SEEK INNOVATION AT THE SOURCE

Monash University's Faculty of Information Technology ranks first in Australia[1] and above world standard for computer science and IT[2]. But most importantly, we stand proudly committed to IT for social good.

We're the home of big ideas and big action. Where ambition meets creativity. And where a positive impact is the core of our work – not a consequence.

We cover every specialisation in technology that's integral to our future. Together they drive our interdisciplinary research, which addresses the key challenges of the age: Thriving Communities, Geopolitical Security and Climate Change.

Since our inception in 1990, we've been at the vanguard of education and research in IT. We consistently rank in the world's top 100 for our field[3] and we're the only dedicated information technology faculty out of Australia's prestigious Group of Eight.

Our industry and government partners are vital to this success and renown.

From multinational corporations to start-ups and NGOs, our collaborators help us equip the future workforce, bridge skill gaps, advance the state-of-the-art and make the world a better place.

So, if you're looking for innovation, creativity and ingenuity, you've come to the right place. Let's transform tomorrow – together.

1. Times Higher Education World University Rankings by Subject 2024
2. 2018-2019 State of Australian University Research: ERA National Report
3. 2025 QS World University Rankings by Subject, Times Higher Education World University Rankings and the Shanghai Global Ranking of Academic Subjects

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ABOUT THE FACULTY

Underpinned by our ethos 'IT for social good', the **Faculty of Information Technology** is where visionaries are made and innovation is born.

A REPUTATION OF GLOBAL ESTEEM

#1
IN AUSTRALIA FOR COMPUTER SCIENCE
(TIMES HIGHER EDUCATION WORLD UNIVERSITY RANKINGS BY SUBJECT 2024)

#37
RANKED GLOBALLY OUT OF 1400+ UNIVERSITIES
(QS WORLD UNIVERSITY RANKINGS 2025)

#21
IN THE WORLD FOR IMPACT
(TIMES HIGHER EDUCATION IMPACT RANKINGS 2023)

A STRONG, TRANSNATIONAL NETWORK

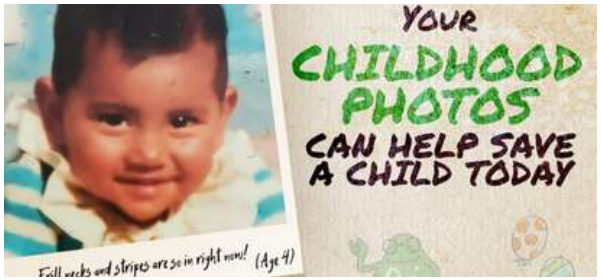
100+
PARTNERS ACROSS INDUSTRY, GOVERNMENT AND NOT-FOR-PROFIT

150+
COLLABORATING UNIVERSITIES

46,000+
ALUMNI ACROSS 155 COUNTRIES
AUSTRALIA'S LARGEST TECH GRADUATE COMMUNITY

LEADING, MULTIDISCIPLINARY EXPERTISE

The expertise in our faculty spans all major areas of IT and computer science, both current-day and rapidly emerging.



ARTIFICIAL INTELLIGENCE FOR LAW ENFORCEMENT AND COMMUNITY SAFETY

Brings together Australia's largest university and Australia's national police agency to research the next generation of AI for law enforcement and community safety applications.

- Countering child exploitation
- Curating ethical datasets
- Detecting illegal firearms

CREATIVE TECHNOLOGIES

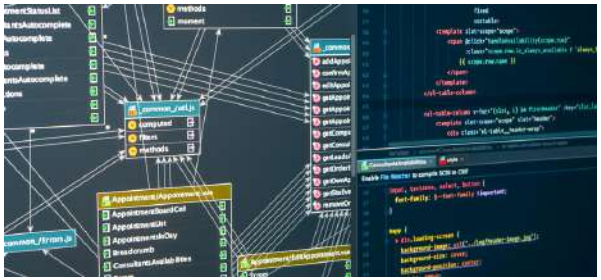
Exploring the possibilities at the intersection of art, technology and accessibility.

- Inclusive technologies
- SensiLab
- Exertion Games Lab

CYBERSECURITY

Helping countries assess and enhance their cyber maturity, culture, skills and capacity while shaping international quality standards.

- Blockchain
- Post-quantum cryptography
- Privacy-preserving machine learning
- Data security and privacy



DATABASES AND DISTRIBUTED SYSTEMS

Developing leading solutions to manage, store and process big data – while extracting insights with vast applications.

- Big data management
- Urban computing
- Spatial databases
- Internet of Things data processing
- Fog, edge and cloud computing
- Mobile information systems

DIGITAL TRANSFORMATION

Reimagining equity beyond physical access to technologies and optimising the social, cultural and economic benefits of ICTs.

- Recordkeeping informatics
- Information systems
- Community and development informatics
- Librarianship
- Digital civics and community-driven IT interventions

EDUCATION AND ANALYTICS

Using data to enrich human learning and shape computing education while equipping students and professionals to benefit from analytics.

- Assessments and feedback
- 21st century skills
- Human factors
- Multimodal learning analytics
- Analytics for curriculum and employment

EMBODIED VISUALISATION

Enhancing people's understanding and engagement with complex information and analytics systems through innovative data visualisation and interaction.

- Immersive analytics
- Network visualisation
- Geovisualisation
- Augmented and virtual reality
- Interactive optimisation

EMERGING TECHNOLOGIES

Exploring the social, cultural and experiential dimensions of the design, use and futures of new and emerging technologies.

- Energy Futures
- Future of Health and Wellbeing
- Future Mobilities
- Future of Work and Learning

MACHINE LEARNING

Future-proofing organisations and industries with the power of machine learning.

- Generative AI and adversarial networks
- Theoretical foundations of machine learning and AI
- Deep learning and representation learning
- Bayesian and statistical machine learning
- Robust and adversarial machine learning
- Graphical models, bayesian networks and graph neural networks
- Time series classification and analytics

OPTIMISATION

Developing optimal solutions to complex, multi-faceted problems with a rare human-in-the-loop approach.

- Modelling
- Solving
- Multi-agent path finding
- Energy optimisation
- Bioinformatics
- Interactive optimisation

SOFTWARE ENGINEERING

Driving software solutions suited to all users and their diverse needs.

- Artificial intelligence-augmented software engineering (AI4SE)
- Engineering AI-based software systems (SE4AI)
- Human centred software engineering

VISION AND LANGUAGE

Using dual expertise to equip machines with the ability to comprehend and produce images, scenery, text and languages.

- Joint visual and language learning
- Multilingual natural language comprehension and generation
- Knowledge graph representation, reasoning, question answering and network representation learning
- 3D visual computing and analytics

RESEARCH INSTITUTE

MONASH AI INSTITUTE

The Monash AI Institute consolidates the impactful work in artificial intelligence happening across the Faculty of IT's research groups and Monash more broadly – connecting researchers into a vibrant, collaborative community. It's a great place for partners to engage in holistic AI projects combining the technical, social and ethical while tapping into leading expertise across the University.

MONASH ENERGY INSTITUTE

The Monash Energy Institute is working to accelerate the transition towards a sustainable energy future by fostering and facilitating impactful interdisciplinary research. Partners can collaborate with our IT researchers to support this mission in a variety of ways – from developing smart energy systems to driving the integration of renewables into the grid.

HOW TO MAKE STEM LEARNING MORE ACCESSIBLE

Hosted in October 2024 with support from a Google grant, Associate Professor Kirsten Ellis ran workshops for educators to learn how they can use her award-winning TapeBlocks to make STEM subjects more accessible for students with disabilities. All workshops reached capacity and attracted national and international interest within and beyond the education sector.

What's more, over 100 free TapeBlocks kits were distributed along with lesson plans aligned to the Australian curriculum – allowing participants to hit the ground running.

RESEARCH THEMES

DIGITAL HEALTH

Engaging in socio-technical projects to address issues in patient-doctor interactions, optimal treatments and patient-centred monitoring while advancing trustworthy data sharing and integration across healthcare.

Focus research areas

- Cardiovascular health and wellbeing
- Gerontechnology
- Digitally-enabled care models of the future
- Neurosciences and mental wellbeing
- Electronic medical recordkeeping
- Pharmaco-informatics
- Equity through digital health
- XR for health
- Forensic informatics

IT FOR SUSTAINABILITY

Harnessing IT to accelerate projects and collaborations that contribute to the UN Sustainable Development Goals (SDGs) – creating a healthier, safer and fairer future for all.

Focus research areas

- Environmental informatics
- IT for sustainable energy
- Learning analytics
- Health and wellbeing

SDGs

- Climate Action
- Affordable and Clean Energy
- Quality Education
- Good Health and Well-Being

USING AI TO FAST-TRACK URGENT CARDIAC CARE

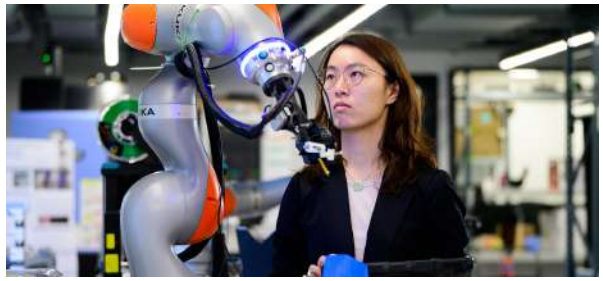
Partnering with Ambulance Victoria | Supported by a $1.36M government grant

A leading cause of death in Australia, cardiac arrest can happen to anyone at any time, often without warning. For those who don't receive hospital care, their chance of survival is only 10%.

Our experts have developed AI technology to help triple zero operators identify more accurately and quickly whether an emergency call is about a cardiac arrest. This will help fast-track critical care – and may save an estimated 185 lives every year.

The AI technology runs in the background during incoming emergency calls. Monitoring with utmost precision, it identifies keywords, language and sound patterns of the caller that are likely to indicate that a person is suffering from cardiac arrest. Once signs are detected, the system will immediately alert the operator to dispatch a high-priority ambulance.

STATE-OF-THE-ART FACILITIES



DIGITAL TWINS LAB (MONASH INNOVATION LABS)

Create virtual replicas to investigate, visualise and analyse the impact of new operations, processes, interactions, transformations and optimisations on manufacturing – risk-free.

EMBODIED VISUALISATION LAB

Explore information visualisation, accessibility and responsive document layouts in the lab's VR and AR environments, offering 15 open-plan development workstations and adaptable grid structures.

EXERTION GAMES LAB

Transform the future of games and play by combining equipment and expertise at the intersection of interaction design, sports, psychology, human-computer interaction and embodiment thinking.

MONASH ASSISTIVE TECHNOLOGY AND SOCIETY CENTRE

The world's largest group in assistive tech and leaders in Auslan research that's enhancing quality of life by making employment and education more inclusive. It creates opportunities like PhD scholarships for people with disabilities and innovations co-developed with community and NGOs – invented in makerspaces equipped with 3D print rooms, assembly areas, laser and vinyl cutters, a soldering station, heat guns, drill presses and basic oscilloscope.

MIXED REALITY STUDIO

Uncover the potential of AR and VR in this studio equipped with overhead grids, green floors and curtains, optical motion capture, inside-out headsets, an ambisonic speaker system and areas for mounting devices.

NATIVEBEE+ TECH FACILITY

Harness novel AI, data science and computer simulation developments to investigate insect-plant relationships that underpin food chains and sustainable terrestrial ecosystems.

STATE-OF-THE-ART FACILITIES

ROBOTICS RESEARCH FACILITY

Simulate a range of environments and scenarios to experiment with human-robot interactions – underpinning advancements of robotic applications in the home, community and industry.

SENSILAB

Develop projects focusing on creative AI, media futures, interactive, spatial experiences and programmable matter.

G12 USABILITY STUDIO

Engage in research analytics such as eye tracking, robotic interaction, language data and more in this control room fitted with one-way glass and views into three observation spaces.

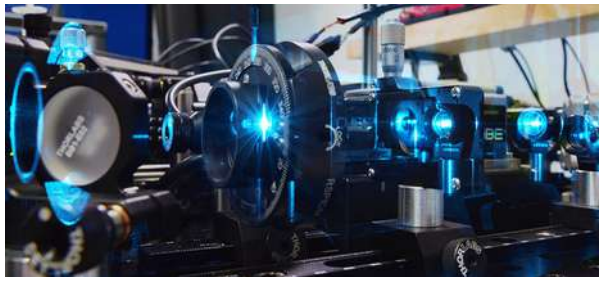
TECHNOLOGY AND DESIGN BUILDING AND LEARNING SPACES

Situated within one of the most efficient and innovative buildings of its kind, our teaching spaces include an interactive tiered collaborative room that accommodates 360 people, a number of study areas and more.

CUTTING-EDGE RESOURCES

Monash Advanced Research Computing Hybrid (MonARCH)

A next-gen, high-performance computing cluster addressing the current and future needs of the Monash computing community.



Monash eResearch Centre

An umbrella organisation that runs national computing and IT initiatives, partnering widely to offer advice and access to advanced computational and data infrastructure.

Moodoo

An open-source, publicly-available program based on the concept of spatial pedagogy that can help analyse the spatial positioning of teachers within a teaching space using indoor positioning trackers.

MiniZinc

A free, open-source, solver-independent modelling language developed by Monash, Data61 and The University of Melbourne used to model constraint satisfaction and optimisation problems while leveraging a large library of predefined constraints.

Multi-modal Australian Sciences Imaging and Visualisation Environment (MASSIVE)

Australia's specialised facility for imaging and visualisation, supporting high-throughput parallel processing and deep learning techniques to solve difficult research questions and better extract insights from data.

Research Cloud @ Monash (R@CMon)

Australia's federated research cloud and a core National Collaborative Research Infrastructure Strategy facility, letting you store, access and analyse data at any time, create virtual servers on demand and collaborate remotely.

OUR COMMUNITY OF PARTNERS (A snapshot)

RESEARCH

Develop groundbreaking products and services. Gain an enduring competitive edge. Drive cutting-edge discoveries. Make a positive, long-term impact.

PARTNERSHIP OPTIONS, CONTRIBUTIONS AND BENEFITS

#21

IN THE WORLD FOR IMPACT

(TIMES HIGHER EDUCATION IMPACT RANKINGS 2023)

100+

COLLABORATORS GLOBALLY

$47.1M

GRANT FUNDS SECURED WITH PARTNERS FROM 2019-2023

(AS OF DECEMBER 2023)

GOVERNMENT INTIATIVES

PROGRAM	BENEFITS
AUSTRALIAN RESEARCH COUNCIL LINKAGE PROJECTS Funds alliances between higher education institutions and research end-users that typically run for three years. Projects are selected based on competitiveness and potential to solve relevant challenges.	• Government funding that matches your cash contribution or more. • World-leading expertise and talent to stay abreast of the latest IT trends. • The chance to develop proprietary technology and capabilities. • Elevated profile through globally significant research. • Capabilities to scale your business and augment its impact. • Potentially qualify for the Australian Government R&D Tax Incentive.
AUSTRALIAN RESEARCH COUNCIL INDUSTRY FELLOWSHIPS Funds Industry Fellows who are researchers that work hand in glove with Australian businesses to develop next-gen products and services. The Fellow will spend at least 20% of the time working in the partner's industry setting and at least 20% at Monash.	• Develop research capabilities in commercialisation. • Promote workforce mobility across industry and academia. • Drive research commercialisation outcomes.
AUSTRALIAN RESEARCH COUNCIL (ARC) INDUSTRY HUBS AND TRAINING CENTRES Funds research collaborations between universities and external organisations that give higher degree by research and postdoctoral researchers innovative industry training. **Industry Hubs** ARC funding of $500K-$1M for hubs running between 3 and 5 years. **Training centres** ARC funding of $650K-$1M per annum for the first 3 years and then $150K - $1M for the fourth year.	• Gain greater R&D capabilities. • Help drive cutting-edge solutions to industry transformation priorities. • Nurture end-user research expertise vital to Australia's future. • Support growth and employment in key sectors. • Develop new industries. • Unlock capacity and resources you may not have.
AUSTRALIAN RESEARCH COUNCIL COOPERATIVE RESEARCH CENTRES Supports industry-led collaborations with research for up to 10 years.	• Access leading-edge research and insights into trends and innovations relevant to your sector. • Transform research outcomes into practical applications and tangible end products. • Tap into additional funding to support research projects, infrastructure development and commercialisation. • Boost your reputation as a trailblazing and research-oriented organisation.
AUSTRALIAN RENEWABLE ENERGY AGENCY (ARENA) GRANTS Spanning the entire innovation chain from research to deployment, ARENA funding aims to accelerate the affordability of new technologies and build investor confidence in renewable energy projects. There are many opportunities that fall within this program, from renewables to digital health.	• Access financial support that offsets the costs of developing and implementing renewable energy projects. • Get support from ARENA in navigating regulatory, technical, commercialisation and market considerations. • Open networking opportunities with other industry players, research institutions and government agencies. • Contribute to sustainability goals and a healthier tomorrow.

A FANTASTIC INCLUSION INTO OUR CURRENT PROGRAMS OF SUPPORT

Wallara has a strong partnership with Monash University, Associate Professor Kirsten Ellis and the STEAM department. The STEAM program we're developing is a fantastic inclusion into our current Programs of Support, fostering a sense of self-based inquiry and allowing each participant to take on a role and collaborate to complete a final product.

Wallara Australia
ARC Linkage Project Partner

GRADUATE RESEARCH

PROGRAM	BENEFITS
NEXT GENERATION GRADUATES PROGRAMS Offer industry placements with extensive research and development into AI and emerging technologies. We have a range of existing programs you can participate in, spanning areas such as sustainability, mental health, cybersecurity capabilities, manufacturing, responsible AI, quantum technologies and augmented human operations.	• Help create a competitive, capable workforce to sustain Australia's future. • Play a significant part in driving the growth of Australia's tech sector. • Form and access a pipeline of high-calibre talent at the forefront of technological advancement. • Unlock immense economic opportunities offered by AI and emerging technologies.
PHD INDUSTRY ENGAGEMENT PROGRAM Fund an IT PhD candidate possessing in-demand IT skills for 3 to 6 months, embedding them in your organisation.	• Introduce research and development into your organisation. • Tap into world-class interdisciplinary expertise across the Faculty of IT. • Create a test-bed for innovation and use the knowledge derived to upskill other employees. • Engage with highly sought-after IT skills to bridge skills gaps in your company. • Get rapid results in less time and promote these achievements through white papers, conferences and other high-value channels.
FULL AND TOP-UP SCHOLARSHIPS Leverage capacity and fund an IT PhD student to work on an industry problem or top up an existing stipend.	• Contribute to driving innovations in your industry while solving its pressing problems. • Help develop talented PhD candidates into impactful researchers. • Attract top-tier talent to your organisation. • Gain access to potential breakthroughs that can be applied directly to your business.
RESEARCH INTERNSHIPS Employ a PhD student as an intern, securing dedicated resources to tackle your big business problems while accessing Monash's leading expertise.	• Bring fresh perspectives, critical thinking and strong problem-solving into your business. • Integrate in-depth research capabilities into your workforce and apply it to your unique challenges. • Retain top talent who are already familiar with your business. • Strengthen your ties with Monash, a globally-leading research university.
INDIAN INSTITUTE OF TECHNOLOGY BOMBAY (IITB) MONASH RESEARCH ACADEMY Fund a PhD student who will study for 3 years in India and 1 year in Australia – gaining research and development expertise from two globally-leading institutions.	• Receive exclusive invitations to theme-based workshops, seminars and conferences at the Academy. • Access a pipeline of high-calibre talent through the IITB-Monash PhD program. • Tap into extensive networks in government and industry across both countries. • Work on industry-relevant problems and access the opportunity to engage with India.

MONASH RESEARCH AND CONSULTANCY

PROGRAM	BENEFITS
MONASH GRID INNOVATION HUB A collaborative research vehicle uniting industry, government and top researchers to create new opportunities for Australia to lead in energy globally.	• Access the Hub's cutting-edge facilities. • Meet all the necessary requirements for deployment and commercialisation. • Contribute to Australia's position as a leader in energy and leverage this reputation. • Network and collaborate with the industry leaders, investors, government agencies and world-class researchers in the Hub's ecosystem. • Harness unrivalled expertise across technology, engineering, sustainability and business.
CONTRACT RESEARCH Engage our world-leading experts across the breadth of IT to identify, investigate and solve pressing business challenges.	• Identify and mitigate risks early. • Create bespoke solutions with internationally recognised subject matter experts. • Define your research problem or new opportunities to explore. • Leverage Monash University's state-of-the-art research facilities. • Accelerate innovation, hone your edge and improve your organisation's efficiency.

EDUCATION

Shape the next-generation workforce. Secure a strong talent pipeline. Tap into more cost-effective resources. Integrate new ideas and perspectives.

OUR COURSES

- Bachelor of Information Technology
- Bachelor of Computer Science
- Bachelor of Computer Science Advanced (Honours)
- Bachelor of Software Engineering Advanced (Honours)
- Master of Information Technology
- Master of Computer Science
- Master of Business Information Systems
- Master of Data Science
- Master of Artificial Intelligence
- Master of Cybersecurity

PARTNERSHIP OPTIONS, CONTRIBUTIONS AND BENEFITS

FOR GRADUATE EMPLOYABILITY

GOOD UNIVERSITIES GUIDE 2024

#1

IN AUSTRALIA FOR COMPUTER SCIENCE

(TIMES HIGHER EDUCATION WORLD UNIVERSITY RANKINGS BY SUBJECT 2024)

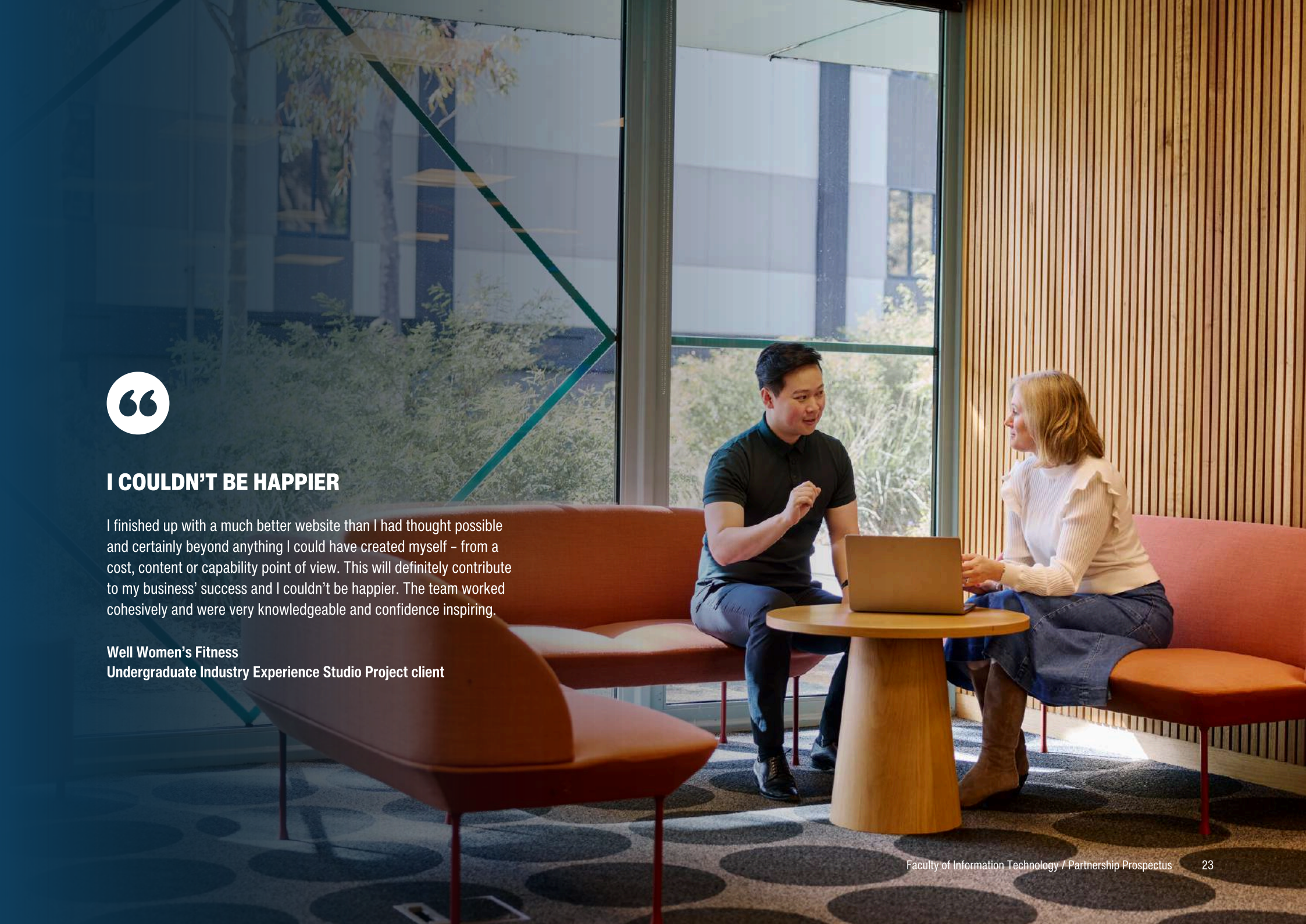
#37

RANKED GLOBALLY OUT OF 1400+ UNIVERSITIES

(QS WORLD UNIVERSITY RANKINGS 2025)

COURSEWORK OPPORTUNITIES

PROGRAM	CONTRIBUTIONS	BENEFITS
INDUSTRY-BASED LEARNING (IBL) The IBL program places talented and high-performing undergraduate IT students with leading organisations. Students receive an education grant funded by the industry partner, who, in return, gets access to a cost-effective and exclusive graduate recruitment program.	IBL partners must: • have an office in Melbourne with approximately 50+ IT staff • host a student for six months • fund an education grant for each student.	• Get priority access to top talent – with 90% of IBL students getting job offers from partner organisations! • Gain fresh perspectives and ideas for your projects. • Engage more cost-effective resources for your initiatives. • Enhance the mentoring and leadership capabilities of your staff.
INDUSTRY EXPERIENCE STUDIO PROJECT CAPSTONE UNITS Interdisciplinary teams of students design, develop and deliver an IT application or software project across one or two semesters, depending on the degree. Solutions are created for business clients or to address a social good challenge.	No monetary commitments required. **Assign a project (undergraduate)** Set a project for a student team and be available for client meetings during the project term. **Mentor teams (postgraduate)** Visit Monash and advise teams as they pitch their ideas and bring them to life. **Present as a guest lecturer (postgraduate)** We offer slots for guests from industry to present on their business-relevant technologies, practices or professional experiences. **Be a judge at the expo (postgraduate)** Become a judge at our trade-show format expo, held twice a year, and assess teams on the presentation and execution of their projects.	• Get new insights, creative thinking and end-to-end solutions. • Engage more cost-effective resources for your IT business needs. • Access expertise from Monash's leading IT academics. • Identify talent for your workforce. • Count your participation toward volunteering and professionals development hours.
INDUSTRY-FUNDED MASTER'S DEGREES Fund an IT master's degree.	Cover the cost of the selected master's degree.	• Gain a competitive advantage by nurturing a highly-skilled internal talent pool. • Tap into networking opportunities afforded through our master's degrees. • Boost staff retention and loyalty through professional development. • Stay abreast of the latest developments, technologies and capabilities in IT.



I COULDN’T BE HAPPIER

I finished up with a much better website than I had thought possible and certainly beyond anything I could have created myself – from a cost, content or capability point of view. This will definitely contribute to my business’ success and I couldn’t be happier. The team worked cohesively and were very knowledgeable and confidence inspiring.

Well Women’s Fitness
Undergraduate Industry Experience Studio Project client

EXTRACURRICULAR PROGRAMS

PROGRAM	CONTRIBUTIONS	BENEFITS
MONASH STUDENT TEAMS Students work in self-managed, multidisciplinary teams solving important, real-world problems. Mentored by academic and industry advisers, teams persist from year-to-year and act like mini-companies, recruiting new members to fill skill gaps.	Be an industry mentor and/or provide cash sponsorship (negotiated with the teams).	• Build leadership and mentorship capabilities in your organisation. • Make a positive impact by supporting your team's social good mission. • Tap into the ingenuity, acumen and passion of your student team.
WOMEN IN TECHNOLOGY (WIT) MENTORING PROGRAM Connects women IT students at Monash with experienced alumni and industry professionals for four months.	Become a mentor for four months, open to alumni and IT industry professionals who are: • women • non-binary or gender-diverse Attend the program's launch, networking and celebration event, as well as regular meetings with your mentee.	• Shape the experts of tomorrow while honing your leadership skills. • Expand your professional network with the IT community at Monash. • Receive a digital credential showcasing your mentorship experience. • Help advance gender equity in technology. • Access resources to support your and your mentee's professional development.
ENGINEERING CO-OPERATIVE (CO-OP) EDUCATION PROGRAM **(Software engineers)** Offers exclusive access to software engineering students, usually entering their penultimate year, via paid internships. Students are selected through a competitive application process and complete a robust employability skills program.	Employ co-op students in your organisation full-time for 3, 6 or 12 months. Provide a salary the same as, or close, to a graduate engineer's salary.	• Secure a sought-after Monash-trained software engineer. • Actively train and develop your future workforce. • Employ a job-ready student to work on priority projects. • Play a vital role in strengthening software engineering capabilities.
COURSE-RELATED SHORT-TERM LEARNING STUDENT PLACEMENTS Students find their own work experience through networking and approaching organisations that offer job opportunities relevant to their course.	Provide short-term unpaid learning placements. To be approved and insured by Monash, placements must be: - supervised - fewer than 80 hours - approved by the Director of WIL.	• Shape the experts of tomorrow while honing your leadership skills. • Expand your professional network with the IT community at Monash. • Get Monash support for your short-term placement/s. • Recruit a student from one of the world's top universities. • Embed high-calibre, cost-effective resources into your business.

MONASH University

PARTNER WITH US

Let’s forge a strategic alliance to meet your business goals,
make a positive impact and nurture a confident, capable workforce.

fit-research-services@monash.edu

monash.edu/it/industry-and-community/engage-with-us

Monash Information technology

SCAN ME

MONASH
INFORMATION
TECHNOLOGY