



## STUDENTS' PROGRAM

### JUNE 04

**15:00-16:00** Students and Teachers arrive at the hotel

**16:00-16:45** Welcome by Dr. Pol Koutsakis, CodeCrush Program Coordinator

**16:45-17:30** Amazing Race to explore the Murdoch University campus

**17:30-18:15** Dinner

**18:15-19:00** Quiz games

**19:00** Return to the hotel

### JUNE 05

**9:00-10:15 Vanessa van Beek**, Workshop: "Lego Series Play", Room 360.3.032

While leading a Security Operations Centre in 2021 Vanessa began experimenting with LEGO Serious Play (LSP) as a means to provide a safe space, enabling individuals and teams to problem solve and innovate.

One of the strengths of LEGO Serious Play is that it democratizes the process of idea generation and problem-solving, ensuring that every voice is heard. The hands-on, playful nature allows for turn-taking and gives introverts and less dominant team members a comfortable platform to express their ideas. It unlocks a wealth of diverse perspectives and approaches that are essential in tackling complex cyber challenges.

This session is a hands-on workshop allowing opportunity for "individual" LEGO builds and a "shared model" (A model built by a group).

The session will begin with individual models allowing personal insights, reflection and storytelling. The session will then transition to "shared models" leveraging insights, and using them as building blocks to develop collective understanding.

Vanessa Van Beek is a cyber security leader with deep industry experience. She has experience leading multi-disciplinary teams, embedding robust security into digital transformation. Vanessa's background includes Security Operations, Incident Management, Risk Governance and Solution

Design. Vanessa is an advocate for continuous learning and knowledge sharing within the cyber security community seeing this as critical to staying ahead of emerging threats. She has 20 years of industry experience, coupled with a Law degree, Master of Business Administration, and a post-graduate diploma in Psychology, which guides her understanding of Technology, Risk, Strategy, and Culture. Her professional qualifications include CISM, CIPM and she is a graduate of the Cyber Leadership Institute and a Certified LEGO Serious Play facilitator. Her experiences have shaped to know crises are inevitable, and preparing to respond requires disciplined operational procedures, responsive technology and a culture of teamwork and continuous learning. Vanessa was a winner in Australian Women in Security Awards - Cybersecurity Champion and awarded CSO30 leadership award for fostering Security-Conscious culture.

#### **10:15-10:45 Coffee/Tea Break**

#### **10:45-12:15 Kate Kirwin, Workshop: "Coding is a Piece of Cake", Room 360.1.010**

This is a hands-on workshop that introduces girls to coding through the magical world of cupcakes. By the end of the session you'll see how coding is like baking (following a recipe and coming up with something unique) - and we'll even play a fun game called Cupcake Smash! This workshop is facilitated by She Codes Australia, a coding program for women trying to close the gender gap in technology, one cupcake at a time.

*Kate is passionate about world changing ideas and is dedicated to building pathways for women to enter tech careers. Kate Kirwin founded She Codes Australia in 2015, providing the networks, technical skills, and confidence for women to enter tech careers. Kate's motto in life is 'Always Bring the Sparkle' - you can usually find her wearing bright colours, building community and holding a microphone. Kate firmly believes in the power of curiosity, connection and creativity. When she's not working in tech, she's a passionate hula hooper and Swiftie. Her professional achievements have been recognised with the Business News 40 Under 40 Award, a Women in Digital Champion of Change award, and The West Australian's Rising Star Award. She was recently named as WA's 2024 Young Australian of the Year.*

#### **12:15-12:45 Lunch**

#### **12:45-14:30 Squadrone, Workshop+Drone Show. Workshop in room 360.1.010**

**The drone show will take place at the Kim Beazley Lecture theatre.**

In this engaging workshop, students will explore the exciting world of drones, learning about their real-world applications, safety protocols, and how they are transforming industries. They will first test their flying skills in a simulator before programming drones to complete dynamic flight missions using block coding. To inspire further learning, the session concludes with a captivating drone light show, demonstrating the creative and technological potential of drone swarming and automation.

#### **14:30-15:00 Coffee/Tea Break**

**15:00-15:45 Prudence Jofirisi**, Talk: “Zero to Cyber: My Journey into STEM and Cybersecurity”, Room 360.1.010

*Prudence began with little knowledge of computers, but a burst of curiosity led her on an unexpected adventure into STEM. Incredible mentors and real-life challenges helped her discover the mysteries of cybersecurity. Join her as she shares how passion and guidance can turn a simple start into an exciting tech adventure!*

**16:00-17:30 Murdoch University Outreach Team**, Workshop: “Sphero robots”, Room 360.1.010

*Join the CodeCrush Lets Get Rolling Challenge to enhance your coding skills with advanced JavaScript techniques. Compete in a gamified workshop using Sphero robotics to complete exciting tasks that test your problem-solving and creativity. With guidance from experienced mentors, you'll gain hands-on experience and a deeper understanding of real-world coding applications and exposure to JavaScript.*

**17:30-20:00 Dinner and Video Games at the Gym/Esports Hub**

## **JUNE 06** (COMMON PROGRAM FOR STUDENTS AND TEACHERS)

**09:00-10:00 Visit to the Murdoch University Kulbardi Aboriginal Centre.**

**Rebekah Smith and Jacob Wehr-Murphy**, Workshop: “Interactive Quiz on Aboriginal History and Famous Figures”.

**10:15-12:45 Excursion from Murdoch University to Immersive Technologies headquarters, Osborne Park.**

### **What’s in store for you?**

Hey Code Crush Students, welcome to Immersive Technologies! We're super excited to have you at our Osborne Park Office. Get ready for an unforgettable experience! **Remember to wear closed in shoes, this is a safety requirement.**

**Drive the Big Machines:** Ever wondered what it's like to drive a massive mining truck? Now's your chance! You'll get to hop on our state-of-the-art simulators and test your skills driving different mining machines.

**Underground Adventures:** Dive into the world of underground mining! Operate a complex machine and explore a realistic underground mine site. It's like being in a real mine, but way cooler!

**Top Gun Challenge:** Think you have what it takes to be the best? Compete with your friends to load the most earth into a truck using a digging machine. Who knows, you might just become our Top Gun Operator!

**Meet the Developers:** Ever wondered what a day in the life of a software engineer is like? You'll get to chat with our developers, see where they work, and learn all about their exciting projects.

We can't wait to meet you all and share this incredible experience. See you soon!

### **About Immersive Technologies**

*At Immersive Technologies, we're proud to be driving continuous improvement of human performance within the mining industry. As part of the global Komatsu Group, we're the world's largest supplier of mining equipment simulators, with our cutting-edge solutions deployed in over 50 countries.*

#### **What makes us special?**

★ **Driving Excellence:** *We're dedicated to continuously improving human performance in mining, making operations safer and more efficient.*

🌐 **Global Impact:** *Our simulators are used worldwide, helping operators from different corners of the globe enhance their skills and safety.*

💡 **Innovative Projects:** *Our team in Perth works on some of the most exciting and innovative development projects. From real-time simulation and low-level hardware interfacing to web development and data analytics, our developers get to explore a diverse technology stack.*

📚 **Learning & Growth:** *At Immersive, there are endless opportunities to learn and develop new skills. Our projects make a real difference, and our team loves being part of something that truly impacts the industry.*

**12:45-14:45 Excursion from Immersive Technologies headquarters to Bankwest Headquarters, Raine Square, Perth.**

**15:15 Return to Murdoch**

**15:30-17:00 Angie Waszewski and Andrew Battisti, Workshop: "A History of Science and Technology", Room 360.4.021**

Technology and coding has become a fundamental part of modern society, integrated into almost every aspect of our daily lives. In this session, we'll look at how technology became such an integral part of our society and discuss all the biggest moments, discoveries and people in the history of science and technology. We'll look at the ways these big moments have contributed to modern science and technology and how it is perceived in society.

*Angie and Andrew are both astrophysicists studying the Universe. Angie is a PhD student at Curtin University, having studied her undergraduate here in Perth. In her PhD research, Angie characterises and studies the twinkling of distant galaxies using world-class telescopes here in WA. Andrew grew up on a dairy farm in New York in the USA, and after pursuing a PhD in Massachusetts, Andrew moved to Australia to continue studying how galaxies have evolved throughout the history of the Universe. He studies the impacts of dust on our observations and understanding of galaxies using world class telescopes over a range of wavelengths of light and colours.*

**17:00-19:00 Break – return to the hotel**

**19:00-19:45 Dinner**

**19:45-22:00 Movie Night, Kim Beazley Lecture Theatre**

## JUNE 07

**9:00-10:30 Donna Buckley**, Workshop: “Byte Club - Girls that hack!”, Room 360.1.010

When Alice and Bob want to share a secret they use encryption methods to make sure Eve the Evesdropper does not read their message. The battle between codemakers and codebreakers is ancient and this workshop will introduce you to this hidden science. After gaining an understanding of some of the tools used to protect and hack secrets, you will further develop your cybersecurity skills in Tempus, a beginner friendly capture the flag to help you go from zero to hacker.

*Donna Buckley is the President of the Mathematics Association of Western Australia (MAWA) and a recipient of the Prime Minister’s Prize for Excellence in Science Teaching in Secondary Schools, Women in Technology WA STAR Award and Best Volunteer at the Australian Women in Security Awards. She is actively involved in the Girls Programming Network, inspiring young women to engage in coding. Committed to advancing education and cybersecurity, she is currently pursuing a Master’s in Cybersecurity to bridge the gap between industry and the classroom. Her work reflects a deep dedication to empowering students and educators through innovation and leadership.*

**10:30-11:00** Coffee/Tea Break

**11:00-12:00 Michelle Sandford**, Workshop: “Prompt Engineering with Microsoft”, Room 360.1.010

5 years ago the role of Prompt Engineer did not exist, today it is emerging as a key skill that will make the difference between an impressive app and one that cannot be trusted. Learn with Michelle from Microsoft how you can control the AI with the power of your prompts.

*Tedx Speaker, developer community mentor, Microsoftie and international conference Speaker, Michelle Sandford lives at the heart of the coding community and helps drive awareness and engagement as a developer advocate and technology evangelist. She advocates for STEM, the Games Industry and Developers. She presents at around 50 Conferences and Events around the world on Technology, Learning to Code, Open Source and Building Bots. She judges hackathons and encourages the next generation into technology careers.*

**12:00-13:20 Michelle Sandford - Microsoft, Matt Schneider-Founder of Optika Solutions, Lindsey Duncan – Interfuze, Luke McKenna-Bankwest, Hannah White-Australian Institute of Marine Science, Shana Uhlmann-Tattarang, Dan Haagman-Chaleit**, Panel Discussion.  
Room 360.2.023

**Joo Yeon Park**, Senior Lecturer at the Murdoch School of IT, will moderate.

**13:20-13:45** Lunch

**13:45-15:00 David Tan and the Rossmoyne Senior High School Robotics Club**, Presentation, Room 360.1.010. **Natasha Rappa**, Associate Professor and **Kylie Jones**, Lecturer at the Murdoch School of Education will facilitate the presentation.

Rossmoyne Robotics Club, together with their mentor David Tan, will make a presentation on where they are currently up to in the development of their robots (Building and Coding) towards their respective division in the Robocup Junior Australia competition. David will explain the ways in which he supports and inspires students.

The presentation will include:

- demonstration of their robot (or past robots) on the actual fields;
- extracts of their actual codes and explanation of what that code does.
- Panel discussion including how the students got to where they are, the challenges they faced, and what they did to overcome them.

**15:15-16:30 CodeCrush Closing Ceremony, Prof. Dave Parry speech**, Kim Beazley Lecture Theatre

# TEACHERS' PROGRAM

Professional Development Workshops will be delivered by Murdoch University Academics, from the School of Information Technology and the School of Media and Communication

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## JUNE 05

**09:00-10:30 Eko Pam**, Workshop: "Divergent and Convergent Thinking", Room 360.2.024

Learn to use creative ideation tools to generate a range of bold, innovative ideas using creative methods like sketching, prototyping, and brainstorming, and then learn techniques to rein in those ideas to ensure feasible, enjoyable, and properly scoped projects.

**10:30-11:00** Coffee/Tea Break

**11:00-12:30 Keyvan Ansari**, Workshop: "Cyber Hygiene Principles: Keeping your Devices Secure in the Digital Age", Room 245.3.038

In this workshop, we will cover essential cyber hygiene principles to help you keep your personal devices secure. Topics include updating your devices, the importance of regular backups, understanding Multi-Factor Authentication (MFA), using strong passphrases, and recognising common threats like scams and phishing attempts. You'll gain practical tips for navigating the digital landscape safely and effectively, ensuring your personal information stays protected.

**12:30-13:15** Lunch

**13:15-14:45 Tael Harper**, Workshop: "How to spot the bot: Detecting disinformation in the media", Room 245.3.038

The emergence of AI has led to an increasing proliferation of disinformation in the media. In this workshop we will examine some of the tell tale signs of mis/disinformation and explore some of the ways to detect disinformation. The workshop requires participants to use a range of tools and processes - from information and media literacy to open source intelligence tools - to spot the difference between real and fake media.

**14:45-15:15** Coffee/Tea Break

**15:15-16:45 Ben Morton**, Workshop: "Fundamentals of Podcasting", Room 245.3.038

Fundamentals of voice recording, sound editing and podcasting setups. Using podcasting formats, building a template for a themed series of podcasts.

**16:45-17:30** Break

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Videogame and tabletop game design share many principles of iterative development: using paper prototyping, participants will get hands on with mechanics design, explore the fundamentals that create compelling gameplay and learn the tools to iterate and refine games effectively.

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