

# CHRIS CHARLES PAGOLU

[chrispagolu@gmail.com](mailto:chrispagolu@gmail.com) | +61 412 698 775 | [LinkedIn](#) | [GitHub](#)

Third year double-degree candidate pursuing a Bachelor of Electrical Engineering (Hons) and Computer Science at the University of New South Wales (UNSW), Sydney, with a strong interdisciplinary foundation in hardware and software design.

## TECHNICAL SKILLS

- Programming & Scripting: C, Java, Swift, Python, ARM Assembly, Verilog/VHDL, MATLAB/Simulink.
- Hardware & EDA Tools: PCB Design (Altium, KiCad), LTspice, Vivado, Ansys Electronics (FEA), Autodesk Fusion.
- Cloud Platforms & DevOps: Microsoft Azure, Amazon Web Services, Google Cloud, Vercel, Git, Jira.
- Data Visualisation & Automation: Microsoft Excel, Power BI, Power Automate, Microsoft PowerPoint.
- Cyber Security Tools: Checkmarx One, UpGuard, CyberGRX, Protecht, BugCrowd.

## EDUCATION

### Bachelor of Electrical Engineering and Computer Science University of New South Wales

February 2023 - December 2027

- Electrical Engineering: Digital Signal Processing, Control Systems, Energy & Power Systems, TCP/IP Networking, Digital Circuit Design, Analogue Electronics, Electromagnetic Engineering, Quantum Engineering.
- Computer Science: Algorithm Design, Data Structures & Algorithms, Object-Oriented Programming.

## WORK EXPERIENCE

### Cyber Security Support Officer (Cyber Assurance Team) University of New South Wales

Oct 2023 - Dec 2023; Jun 2024 – Aug 2024

- Utilised advanced platforms (Checkmarx One, UpGuard, CyberGRX, Protecht, BugCrowd) and custom Python automation, boosting team-wide data processing efficiency by 25%.
- Partnered with senior stakeholders to define complex data visualisation requirements, leading to real-time dashboard implementations in Microsoft Power BI and cut manual reporting time by 40%.
- Designed and rolled out automated reporting via Microsoft Power Automate, resulting in a 15% reduction in data retrieval errors.
- Coordinated with external vendors & industry experts to revamp cybersecurity protocols, strengthening overall risk mitigation strategies.

## RELEVANT PROJECTS

### AirFrame - AI-Powered Self-Stabilising Tripod

June 2025 - August 2025

#### ELEC3117 Electrical Engineering Design, UNSW Sydney

- Engineered a 3-axis gimbal from concept to functional prototype, designing four custom PCBs in Altium Designer with an ESP32 MCU, BMI088 IMU, and a 2S Li-ion power system supporting USB-C Power Delivery.
- Developed real-time C++ firmware implementing a two-state Kalman filter for sensor fusion and a multi-axis PID control loop, achieving <1.5s settling time and a final static accuracy of  $\pm 0.6^\circ$ .
- Built companion iOS app (AirLink) in SwiftUI, with Aerial—a first-of-its-kind AI assistant integrating multiple LLMs (GPT-5, Claude, Gemini) for voice control, scene analysis, and executing gimbal functions via tool-calling.
- Modelled custom enclosure and interchangeable payload mounts using Autodesk Fusion.

### Tree Buddy - Distinguished Winner

March 2025

#### Apple Swift Student Challenge, Apple Inc.

- Awarded Distinguished Winner prize in Apple's Swift Student Challenge, earning an invitation to WWDC25 at Apple Park.
- Created Tree Buddy, an innovative iOS Augmented Reality app using Swift, SwiftUI, ARKit, and RealityKit featuring an interactive and gamified tree-planting experience to promote sustainability.

### Aurora - Decentralised Messaging App - 1st Place Winner

November 2024

#### ETH Sydney Hackathon

- Built a secure, wallet-authenticated messaging platform from scratch in 24 hours, leveraging Web3 protocols including XMTP for messaging, RainbowKit for wallet connection, and Infura for node access.
- Spearheaded integration of AI-powered features for message suggestions and led team's feature lifecycle from design to deployment under intense hackathon deadlines.

### Cycling.ai

June 2024

#### BuildClub Hackathon, Sydney

- Integrated Generative AI models for intelligent route planning and real-time health analytics, achieving a 50% measured improvement in user planning efficiency.
- Spearheaded full development of application, leading team from ideation to winning the People's Choice Award among 15 competing projects.