SAM TRUSTRUM

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ABOUT ME

About	I am a motivated electrical engineer who has been praised for my self-reliance, technical communication, creative problem solving skills, efficiency, and ability to work well in teams.
Legal Status	Australian-born citizen, UK citizen (through parents), eligible for U.S. E-3 visa
Interests	Hardware/software development, aviation, signal processing, robotics, control systems, data science & machine learning
Online	Projects portfolio LinkedIn Github

EDUCATION

The University of New South Wales (UNSW)   Sydney, AU

Bachelor of Engineering (Honours) (Electrical Engineering)   *Feb 2021 - Aug 2025*

- Technical member & executive of Skylabs (UAV building club) (2022 - 2024)
- Technical director of quantitative finance society (2024)
- *Electives:* discrete control systems, multimedia signal processing, computer architecture, data structures & algorithms, electronics
- *Thesis:* non-intrusive load monitoring for smart renewable grids (hardware development, signal processing, machine learning)

TECHNICAL SKILLS

Software: C, C++, Python, JavaScript, Assembly (MIPS, ARM), MATLAB & Simulink, ROS2, ESP-IDF, React, Expo, STM32CubeIDE, ArduinoIDE
Hardware: PCB design, SMD assembly, Verilog FPGA programming, CAD, 3D printing, laser cutting
General: control systems, signal processing (incl. image processing), data science (incl. ML)

EXPERIENCE

Electrical Engineer Intern   May 2025 - Sept 2025

Contactile   *Sydney, AU*

- Projects:
  * Robotic gripper demonstration system (PCBD, PCBA, ESP-IDF, Fusion, Expo)
  * Image processing & CAD for characterisation of tactile sensors (Python, Fusion, Raspberry Pi)
  * Automated pick and place system with 6-DOF robotic arm (ROS2, Python)
- Technical skills:
  * *Electrical prototyping and troubleshooting:* multimeter, oscilloscope, logic analyser, soldering, printed circuit board design and assembly
  * *Programming:* C, Python, ROS2 on Ubuntu, embedded systems
  * *Mechanical:* CAD with Fusion, 3D printing

Delivery & Retail   2020 - 2023

Various   *Sydney, AU*

- Woolworths Supermarkets: *Team Member (Jan 2023 - Jul 2023)*
- MILKRUN: *Delivery Rider (Jan 2022 - Sept 2022)*
- Dominos: *Delivery Expert (Apr 2020 - Dec 2021)*