

Nathan No-ot

Electrical and electronics engineering student | South Australia | nathannoot@gmail.com | C-Class Driver's Licence

CONTACT

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TARGET ROLES

- Graduate electrical engineer
- Power engineering graduate
- Defence engineering graduate
- Embedded systems / controls graduate

CORE SKILLS

- AS/NZS 3000, AS/NZS 3008, AS/NZS 4777.2, SAPN TS132/TS133, AS1100, GD&T.
- Single-line diagrams, wiring schedules, compliance matrices, drawing/spec review.
- AutoCAD, Inventor, Fusion 360, KiCAD, LTSpice, Logisim.
- Python, MATLAB, C, ROS 2, Arduino/Espressif IDE, ESP/AVR, MAVLink.
- Oscilloscope, multimeter, function generator, soldering, 3D printing.
- 5S, Kaizen, RCA, 8D, inspection, MS Office.

EDUCATION

- Associate Degree in Electronics Engineering - TAFE SA, final year.
- Bachelor of Electrical and Electronic Engineering - Adelaide University, expected 2028 through articulation pathway.

DISCLOSURE

Public portfolio resume. Phone number and street address omitted; employer-sensitive detail kept high level; current outcomes stay pending until measured evidence is ready.

SUMMARY

Electrical and electronics engineering student completing an Associate Degree in Electronics Engineering at TAFE SA and articulating to a Bachelor of Electrical and Electronic Engineering at Adelaide University, expected 2028. Building toward graduate work across power, embedded systems, controls, UAV systems, manufacturing, DFMA, and verification. Strongest evidence combines standards-informed power-system coursework, solar manufacturing exposure, practical electronics projects, and technical documentation.

EXPERIENCE

Production Worker - Tindo Solar

Nov 2025 - Present

- Work on the production line of an Australian solar-panel manufacturer within a Kaizen and 5S continuous-improvement culture.
- Shadowed engineers applying Root Cause Analysis and 8D processes to diagnose equipment faults, building exposure to quality, process reliability, and fault-finding.
- Connect renewable-energy hardware to manufacturing constraints, operator work, documentation, inspection, and supply-chain reality.

Kitchen Supervisor - Plus 82 Pocha

Aug 2022 - Aug 2025

- Led a back-of-house team of 5 through 200-300 covers per night while maintaining about a 10-minute order turnaround.
- Maintained stock control using Excel and ERP/MRP tools, and trained new hires to competency within 3 months.

SELECTED PROJECT EVIDENCE

Solar farm grid connection and commercial electrical design - TAFE SA

- Authored a report on connecting a 1 MW solar farm to the SAPN distribution grid, comparing LV versus HV connection under TS132/TS133.
- Checked reactive-power control, Volt-VAr response, frequency ride-through, anti-islanding, and harmonics against AS/NZS 4777.2.
- Designed a four-tenancy LV cable/protection system to AS/NZS 3000 and AS/NZS 3008.1.1: 35 mm2 consumer mains for 123.6 A demand, 3.4% or lower voltage drop against a 5% limit, 9.2 kA fault current, and Table 8.1 earth-fault-loop checks.

GPS-denied autonomous UAV - current capstone

- Architecting a quadcopter that holds position without GPS using visual-inertial odometry, optical-flow/rangefinder fallback, and staged verification before flight claims.
- Planning stereo-depth obstacle detection and local replanning with D* Lite through ROS 2 on a Raspberry Pi companion computer.
- Partitioned into functional layers with ArduPilot SITL and Gazebo testing, binary pass/fail gates, MAVLink telemetry, and mandatory manual override.

Environmental monitoring station

- Designed 240 V to 24 V conversion and 5 V distribution schematics in AutoCAD while applying AS/NZS 3000 design practice.
- Developed a 2-layer Raspberry Pi HAT PCB in KiCAD using I2C sensors and Modbus RTU over RS485, with SPICE simulation plus ERC/DRC checks.
- Designed an IP66 enclosure and DIN-rail layout in Inventor using DFMA, documented to AS1100 and GD&T.

ESP32 drone and 3D-printed RC car

- Established MAVLink telemetry between an ESP32 drone and ground-control station; designed PET-CF drone airframes for 5 m drop survival and a 3:1 thrust-to-weight target.
- Built a 3D-printed RWD RC car reaching about 30 km/h; designed a PWM speed controller for a 1000 KV BLDC motor on a 3S LiPo using LM324 op-amps and BC547 transistors.
- Manufactured PLA-CF, PETG, and TPU parts to about plus/minus 0.1 mm by tuning printer and design decisions to material data sheets.