NATHAN NO-OT

ELECTRICAL AND ELECTRONICS ENGINEERING STUDENT

South Australia | nathannoott@gmail.com | C-Class Driver's Licence

SUMMARY

Electrical and electronics engineering student in South Australia, 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. I am looking for a student placement or internship in power systems, solar and grid integration, where standards-based design and verified working matter. My strongest evidence combines standards-informed power-system coursework, solar manufacturing exposure, practical electronics projects, and technical documentation.

TARGET ROLES

- Electrical engineering student placement
- Power systems internship
- Solar and grid-integration internship
- Electrical engineering student opportunity

SKILLS

- Standards and documentation: AS/NZS 3000, AS/NZS 3008, AS/NZS 4777.2, SA Power Networks TS132/TS133, AS1100 technical drawing, GD&T, single-line diagrams, wiring schedules, drawing and specification review.
- CAD and design: AutoCAD, Autodesk Inventor, Fusion 360, KiCAD.
- Instrumentation and analysis: multimeter, oscilloscope, function generator, LTSpice, Logisim.
- Programming and embedded systems: Python, MATLAB, C, ROS 2, Arduino/Espressif IDE, ESP and AVR microcontrollers, MAVLink telemetry.
- Manufacturing and quality: 5S, Kaizen, Root Cause Analysis, 8D problem-solving, inspections, soldering, 3D printing, MS Office.

AVAILABILITY

- C-Class Driver's Licence, with flexible availability for metropolitan or regional South Australian sites.
- Willing to complete site inductions and obtain the required safety credentials before commencement.

EXPERIENCE

Tindo Solar

Electrical Engineering Intern, Aug 2026 - Present
Production Worker, Nov 2025 - Aug 2026

- Assist with BOM documentation, component selection, and circuit design under the guidance and authority of engineers.
- Develop and maintain Standard Operating Procedures, work instructions, and engineering documentation to support production consistency.
- Prepare technical documentation and help maintain accurate records for quality control.
- Collaborate with technicians and engineers to resolve machine failures promptly.
- Conducted flash testing of solar panels for voltage, current, and power factor to verify performance, and inspected panels against specifications to find and isolate defects.
- Shadowed engineers applying Root Cause Analysis and 8D processes to diagnose and resolve equipment breakdowns, building practical fault-finding and quality-monitoring exposure.
- Worked the production line of an Australian solar-panel manufacturer within a Kaizen and 5S continuous-improvement culture, and learnt how renewable-energy hardware depends on 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, resolving operational issues quickly enough to maintain about a 7-minute order turnaround.
- Maintained stock control using Excel and ERP/MRP tools.
- Trained new hires to competency within 3 months while building respectful working relationships across the kitchen and front-of-house team.

PROJECT EVIDENCE

Solar Farm Grid Connection and Commercial Electrical Design - TAFE SA

- Authored a technical report on connecting a 1 MW solar farm to the SA Power Networks distribution grid, assessing LV versus HV connection under SAPN TS132/TS133.
- Checked reactive-power control, Volt-VAr response, frequency ride-through, anti-islanding, and harmonic limits against AS/NZS 4777.2.
- Designed a low-voltage cable and protection system for a three-tenancy commercial complex to AS/NZS 3000 and AS/NZS 3008.1.1.
- Sized 25 mm2 consumer mains for a 123.6 A demand, held total voltage drop to <=3.2% against a 5% limit, and verified 8.0 kA prospective fault current and AS/NZS 3000 Table 8.1 earth-fault-loop impedance in a compliance matrix.

GPS-Denied Autonomous UAV - Current TAFE SA capstone

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

Multi-purpose Environmental Monitoring Station

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

ESP32 Drone and 3D-Printed RC Car

- Established MAVLink telemetry between an ESP32 drone and a ground-control station.
- Designed parametric PET-CF drone airframes intended for 5 m drop survival while optimising toward a 3:1 thrust-to-weight ratio.
- Built a 3D-printed RWD RC car reaching about 30 km/h on asphalt.
- Designed a PWM motor 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 +/-0.1 mm by tuning the printer and design decisions to material technical data sheets.

EDUCATION

Associate Degree in Electronics Engineering - TAFE SA

Final year

Bachelor of Electrical and Electronic Engineering - Adelaide University

Expected 2028 through articulation pathway

PUBLIC DISCLOSURE NOTE

This resume is prepared for a public portfolio. It omits phone number and street address, keeps employer-sensitive details at a high level, and marks current project outcomes as pending where measured evidence is not yet ready for publication.