

Matthew Macklin

Instrumentation & Control Engineering Student | Qualified Electrician

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Profile

Final-semester Bachelor of Engineering Technology (Instrumentation and Control) student at UNITEC, Top Student and Top Project award recipient with an 8.11 GPA.

Hands-on experience integrating PLCs, SCADA, and ERP systems with industrial machinery, supported by a strong trade background as a qualified electrician.

Education

BEngTech (Instrumentation & Control) UNITEC Auckland, Expected 2025

NZ Diploma in Electrical Engineering (L6) UNITEC Auckland, 2024

Projects & Research

- MES-ERP Automation Platform: Developed integration between Siemens PLCs, Ignition SCADA, and Xero APIs, automating production KPIs and invoicing.
- Fluoroscopy Mold Detection: Designed and prototyped UV-excitation imaging system for air quality analysis; selected for Unitec Ecology Conference (EAS Symposium).

Technical Skills

PLC Programming (Siemens TIA Portal), Ignition SCADA, MySQL Database Management, P&ID; Interpretation, CAD (Fusion360, SolidWorks), Instrumentation & Control, VFDs, Electrical Systems.

Relevant Experience

Electrician & Crane Technician, Crane & Control Services 2019–2022

- Fault finding, installations, and maintenance on cranes and heavy industry equipment.
- Exposure to PLCs, VFDs, automation, and rigging/mechanical systems.

Electrician (Contract), Various Sites 2023

- Installation and maintenance at automated sorting and pharmaceutical facilities.

PASS Leader, UNITEC 2023–2025

- Tutored physics and engineering students, supporting peers in technical coursework.

Certifications

Qualified Electrician, Forklift Operator's License, EWP, Working at Heights, First Aid Certified.