

YIMING TANG

Auckland, 1010 | Phone: +64 027 245 9303 | Email: smile2milo@gmail.com | Full Driver license

Linkedin: www.linkedin.com/in/yiming-tang-milo

Work Rights: Eligible for Post-study Work Visa upon graduation in 2026 (no sponsorship required)

PERSONAL STATEMENT

Electrical and Electronic Engineering master's student at the University of Auckland with practical experience in power system studies, load flow analysis, short-circuit analysis, distribution-network modelling, electrical design documentation and data-driven engineering reporting. Experienced in using DlgSILENT PowerFactory, MATPOWER, MATLAB, Python, Excel and AutoCAD Electrical to analyse voltage profiles, branch loading, fault levels, transformer tap settings and reactive power support. Seeking a Graduate Electrical / Power System Engineer role in New Zealand, with a strong interest in distribution networks, customer connection support, asset management, future energy solutions and safe, reliable network operation.

KEY SKILLS

Power Systems: Load Flow Analysis, Short-Circuit Analysis, Grid Modelling, Voltage Regulation, Reactive Power Compensation, Transformer Tap Analysis, Transmission Line Loading

Software: DlgSILENT PowerFactory, MATPOWER, PSS/E, MATLAB, Python, PLECS, Simulink, AutoCAD Electrical, Excel, Word, Powerpoint

Engineering: Renewable Energy Systems, Power Electronics, Electrical Drawings, Technical Documentation, Data Analysis, Engineering Reporting

Project Experiences

New Zealand North Island Transmission Grid Power Flow Study

- Built a 29-bus MATPOWER power flow model of the New Zealand North Island transmission backbone using bus, branch, generator, transformer, load, and capacitor data.
- Processed grid parameters from Transpower planning data and converted line, transformer, load, and generator data into per-unit values.
- Performed AC power flow studies to assess bus voltages, branch loading, reactive power distribution, and system losses.
- Analysed the impact of line charging, transformer tap ratios, and shunt capacitors on voltage regulation and reactive power support.
- Simulated EV load growth scenarios to identify convergence issues, low-voltage buses, and overloaded transmission branches.
- Recommended mitigation options including reactive power compensation, tap adjustment, demand management, and network reinforcement.

Power System Short-Circuit Analysis

- Modelled generator bus systems and radial power networks in DlgSILENT PowerFactory.
- Simulated three-phase, single-line-to-ground, line-to-line, and double-line-to-ground faults.
- Calculated short-circuit MVA and initial fault current using generator ratings, voltage levels, and reactance data, then validated manual calculations against PowerFactory simulation results.
- Compared fault current levels to assess protection equipment capacity and system safety margins.

Renewable Energy and Storage Capacity Modelling

- Developed an Excel-based model combining hydro generation, solar PV output, hourly demand, and battery storage.
- Calculated annual hydro generation, water usage, imported grid electricity, average output, and capacity factor.

- Designed a battery operation strategy to estimate the minimum storage capacity required for grid-independent operation.
- Analysed the relationship between installed PV capacity and required battery storage capacity.
- Compared battery and hydrogen storage for seasonal energy storage applications.

WORK HISTORY

Electrical Engineer

Changsha Gujiang Technology Co., Ltd., Changsha, China

May, 2025 – Sep, 2025

- Supported a 5-month EV charging infrastructure project cycle by preparing tender packages, technical submittals and compliance documentation for bidding, design clarification and implementation review.
- Produced and revised AutoCAD Electrical layout drawings, single-line/connection details and supporting design records for EV charging station infrastructure, improving drawing traceability across design review and project handover.
- Completed electrical load calculations for EV charging supply arrangements, supporting cable and equipment sizing, load allocation and safe low-voltage distribution planning.
- Controlled engineering documentation using structured Excel/Word registers, maintaining version history for drawings, technical files and stakeholder correspondence.

Assistant Electrical Engineer

Zoomlion Heavy Industry Science & Technology Co., Ltd., Changsha, China

Jun, 2024 – May, 2025

- Designed and updated electrical drawings for distribution cabinets and mechanical equipment using AutoCAD, supporting system integration and design accuracy.
- Conducted inspections, functional testing and performance evaluation of electrical systems and distribution panels to ensure compliance with safety and industry standards.
- Coordinated with suppliers on electrical components and materials, ensuring specification compliance and timely delivery for production and assembly.
- Collaborated with R&D, production and quality teams to troubleshoot electrical faults in distribution systems and improve equipment reliability.

Part-time Cinema Crew Member

Event Cinema, Westfield Albany, Auckland, New Zealand

Apr, 2026 – Apr, 2026

- Delivered customer service and handled POS transactions accurately in a fast-paced environment.
- Maintained cleanliness, safety standards and supported daily operations including closing procedures.

EDUCATION

Master of Engineering(Electrical and Electronic Engineering)

University of Auckland

Mar, 2026- Nov, 2026(Expected)

Key Courses: Power Systems, Modern Control Systems, Power Electronics

Bachelor of Engineering(Electrical and Electronic Engineering)

Hunan Institute of Engineering

Sep, 2020- Jun, 2024

Relevant Coursework: Power System Analysis, Power System Protection, Power Supply Engineering, Control Systems, Renewable Energy, Power Electronics

ACHIEVEMENTS & CERTIFICATION

- Outstanding Graduate Award(Bachelor's Degree)---Hunan Institute of Engineering
 - Outstanding Student Leader Award(3 times)---Hunan Institute of Engineering
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