

# RISHI MALYALA

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Sydney, Australia

## Education

**University of New South Wales, Sydney**

Ph.D, Electrical Engineering

Research Area: Energy Risk Management and Planning using Predictive Analysis

Doctoral Advisor: Prof. Jayashri Ravishankar, Faculty of Engineering and Associate Dean (Education)

Sydney, Australia

Sep 2024 - Ongoing

**University of New South Wales, Sydney**

M.Eng, Electrical Engineering

Sydney, Australia

Jan 2023

**National Institute of Technology, Tiruchirappalli**

B.Eng, Electrical and Electronics Engineering

Trichy, India

Nov 2020

## Experience

**Mott MacDonald Australia Pty. Ltd.**

**Electrical Engineer**

Sydney, Australia

Feb 2023 – Present

- Specialized in Earthing & Bonding design, CDEGS modelling, and compliance reviews for Sydney Metro, Australian Defence, and Renewable Energy Projects.
- Conducted EMC studies, HV cable selection calculations, developed technical documentation, including earthing reports and CAD drafting of single-line diagrams, earthing plan and cross section layouts for BESS systems and Pumped Hydro projects.
- Experience in earthing system design and analysis, including EPR studies and compliance with ENA EG0 & IEEE80.
- Major successful completion of projects include Lake Lyell and Owen Mountains Pumped Hydro Energy Storage, Sydney Metro West, Wemen, Clermmont and Woolooga BESS design, Defence - Borneo Barracks, Fishermen's Bend and HMAS Creswell.

**University of New South Wales, Sydney**

**Academic Tutor and Lab Demonstrator**

Sydney, Australia

May 2024 – Present

- ELEC9716 Electrical Safety (Postgraduate advanced disciplinary course) Demonstrator.
- ELEC4612 Power System Analysis (Undergraduate and postgraduate disciplinary knowledge course) Demonstrator.
- AGSE Short course: Grid Integration of Renewables using PSCAD Demonstrator.

**Huawei Australia**

**Service Engineer**

Sydney, Australia

May 2022 – Jan 2023

- Specialized in comprehensive support of Huawei's flagship solar and digital energy products and installation procedures.
- Experience in undertaking planning and commissioning feasibility for upcoming commercial-grade solar farms across Australia.
- Responsible for Huawei's Fusion Solar AU7 system integration that logged compliance tests for LUNA2000 battery and LED toggles for cascaded 50 kWh modules across residential customer base.

## Awards & Scholarships

**University PostGraduate Award (UPA)**

UNSW Sydney, Sep 2024

- Tax-free research stipend scholarship valued AUD131,894 for 3.5 years for a Research Doctorate in Electrical Engineering.
- Additional coverage of full tuition fee offset for 4 years (valued at AUD50,000 annually) paid to the university from the Australian Government.

**Best Research Paper Award at International Conference on Smart City and Green Energy (ICSCGE)**  
Sydney, Dec 2024

- Presented for top rated and innovative deep-learning research models using hybrid graph patch informers and sequential models.

**Outstanding Class Representative**

Trichy, 2019

- Class elected representative for consecutive 3 years and class committee member for Batch 2016-2020, NITT.

**Full High School Tuition Waiver Scholarship 2014 - 2016**

India, 2014

- Awarded for national distinction across Central Board of Secondary Education at Velammal Vidyashram, Chennai.

**National Distinction - 100th Percentile Award**

India, 2014

- Awarded for achieving perfect 10/10 GPA across Central Board of Secondary Education India.

**Skills & Proficiencies**

**Technical:**

- Engineering Drawing Drafting and Reviews: Electrical schematics & Layouts (AutoCAD, Revit, BIM360, PDFXchange, BlueBeamRevu).
- Energy & Power System Analytics: Earthing & Bonding (CDEGS, XGSLab), Power system modeling (PSCAD).
- Machine learning & Predictive modeling: Python, TensorFlow, Scikit-learn, PyTorch, NumPy, Pandas, Matplotlib.
- Deep learning architectures: LSTMs, CNNs, Transformers, DSSM, GRU and Hybrid GPI models.
- Programming Tools: Jupyter Notebook, Google Colab, SQL, MATLAB.
- HPC & Parallel Computing: PBS Scripting, CUDA Nodal Scripting for GPU Acceleration.

**Language:** English (Native), Telugu (Native), Hindi (Fluent), Tamil (Fluent).

**Work Rights:**

- Australia (Full work rights - Permanent Resident)
- New Zealand (Full work rights - Australian Resident Visa)
- India (Full work rights - Indian Citizen)

**Certifications & Licenses:**

- Working with Children Clearance (Volunteer) - Issued Jan 2025
- White Card - Issued Mar 2023
- Unrestricted Driver's License - NSW and Indian
- Recreational Pilot License Training - Ongoing

**Research Publications & Projects**

**Weather-Independent Forecasting for State-Wide Energy Markets Using Hybrid GPI-DSSM Model**

ICSCGE 2024 979-8-3315-0634-6/24/ ©2024 IEEE

- Research paper introducing novel hybrid forecasting model for state-wide energy markets, combining Graph-based Patch Informer and Deep State Sequential State Memory architecture to predict electricity prices.

**Enhancing Energy Demand Predictions with Seasonal Patterns and Dual Temporal Inputs in Hybrid GPI-DSSM Model**

PES PowerTech, Germany 2025 Submission ©2025 IEEE

- Research paper with an innovative approach to energy demand forecasting by integrating dual-temporal analysis with weather-based features and annual lag sequences. Novel deep-learning algorithm demonstrating scalability and efficiency in processing large-scale data with reduction in forecasting errors compared to convolutional forecasting methods.

**From Suburb to State: Scaling Spatio-Temporal Energy Forecasting Models**

**Lead Researcher**

National Computational Infrastructure - Australia

- This research focuses on developing advanced numerical machine learning models to address the challenges in forecasting and integrating extrinsic factors like weather, government policy shifts, external trade and market changes. Major research and development of advanced frameworks with modeling capabilities of Graph Attention Networks (GAT) and novel deep-learning algorithms aiding in capturing probabilistic demand-price relationships, and adherence with enhanced localization and regional dependencies factored for energy price forecasts.
- Project awarded 400 kSU on Gadi HPC valued at USD50,000.