

ANG TENG YEN EUGENE

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CAREER SUMMARY

Ph.D. qualified Data Scientist and Operations Researcher with expertise in large-scale optimization, network analytics and machine learning. Currently driving semiconductor fabrication output improvements at Micron while teaching as an adjunct faculty at National University of Singapore (NUS) and conducting independent research. Applying rigorous mathematical models to real-world industrial and policy problems, with multiple peer-reviewed publications across various leading journals and conferences.

EDUCATION

Ph.D. in Operations Research and Analytics @ NUS Oct 2025

Thesis area: Network Design and Resilience, Policy Estimation, Supply Chain Fragility

B. Sc. (Hons) Applied Mathematics, minor in Economics & Statistics @ NUS May 2021

Graduated with Highest Distinction (CAP: 4.57/5) | ORSS Prize 2021 (Best undergraduate in Operations Research)

TECHNICAL SKILLS

Programming Language: Python, SQL, R, MATLAB

Machine Learning & Data Science: scikit-learn, PyTorch, Pandas, NumPy, XGBoost

Optimization & OR: Gurobi, CPLEX, CVXPY, Constraint Programming, LP/MIP/MILP

Graph & Network: NetworkX, igraph, Neo4j, Graph Neural Networks, Community Detection, Centrality Analysis

Data & Visualization: Tableau, PostgreSQL, Plotly

Core Expertise: Large-Scale Optimization & Scheduling, Supply Chain Analytics, Network Science and Analytics, Causal Inference & Policy Evaluation, Predictive Modeling & Forecasting, Simulation, Social Network Analysis, Graph Theory

Soft Skills: Research Design & Academic Writing, Analytical and Problem-Solving, Stakeholder Communication, Teaching & Mentoring, Project Leadership, UAT & Operational Troubleshooting

WORKING EXPERIENCE

Senior Data Scientist @ Micron (August 2025 – Present)

- Designed and developed large-scale optimization models to maximize output in fabrication plants and garner at least 1% output gain
- Led multiple projects which involved designing new features to improve line scheduling and operations while understanding business needs and incorporating operational requests and concerns
- Revamped the existing model to reduce runtime of the scheduling model by at least 2 hours, providing faster planning decisions and minimizing operational delays and the plan-to-production gap in schedule execution
- Applied state-of-the-art research methods to reduce time complexity of the planning model, improving scalability for large fab environments

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- Worked with consultants and site engineers for feature testing and conducted multiple UAT onsite sessions overseas to troubleshoot operational troubles
 - Drove research collaboration initiatives with NUS, participated in in-house technical seminars and applied for RIE 2030 grant call for semiconductor industry

Adjunct Instructor @ NUS (August 2025 – Present)

- Gave a guest lecture for an undergraduate optimization class in Spring 2026
- Responsible for redesigning and curating a Masters of Business Analytics course on network science and analytics

Teaching Assistant @ NUS (January – May 2022, 2023, 2024)

- Teaching Assistant for 3 editions of MSBA Network Science and Analytics class
- Mentored students through course projects and individual consultations
- Conducted guest lecture and tutorials, and achieved high feedback score of 4.9/5

Research Intern @ Institute for Mathematical Sciences / Ministry of Manpower (June – July 2020)

- Collaborated with the Ministry of Manpower to develop natural language processing (NLP) classification models for job description data
- Designed supervised, deep and unsupervised NLP pipelines in Python, achieving high prediction accuracy in multi-class text classification

Research Assistant @ NUS Centre of Maritime Studies (June 2019 – October 2019)

- Contributed to Greenhouse Gas Maritime Project that model emissions from maritime vessels
- Built network and regression models in Python and R on worldwide maritime and trade data

SELECTED PUBLICATIONS

Evaluating Policy Effects through Network Dynamics and Sampling – IEEE Transactions on Network Science and Engineering

- Provided a theoretical framework to estimate policy effects under limited empirical data
- Characterized the effects of the underlying graphical structure, how respondents interact and the possible sampling strategies
- Worked on generative models and real-life networks using Python for numerical experiments

Disconnectivity Brings Robustness? On Network Design For Matching With Vertex Interdiction – Operations Research Letters

- Theoretically derived appropriate graph design that enhances the robustness of networks
- Challenged the conventional wisdom of aligning connectedness with resilience

Estimating Policy Effects in a Social Network with Independent Set Sampling – Social Networks

- Designed a modeling strategy to isolate the direct policy effect and the indirect network spillover effect
- Conducted simulation study on real-life and generated network data using R to illustrate and validate our strategy

An Interpretable Intensive Care Unit Mortality Risk Calculator – IEEE EMBC Conference 2021

- Built an interpretable ICU mortality risk calculator to provide insights for clinicians
- Extracted data from a medical database using Postgres-SQL

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- Developed several machine learning models in Python and performed a benchmarking study, focusing on their interpretability to provide insights for clinicians

ADDITIONAL INFORMATION

Languages: English (native), Chinese (native), Spanish (beginner)

Award:

- **CO Coin for Ex Wallaby** – Leading section during overseas mission
- **NUS Students' Sports Club Half-Colours Award** – Leading the NUS Intellectual Games Club and organizing numerous competitions and projects
- **ORSS Prize 2021** – Best student for undergraduate operations research related courses

Avid Chess Player: Represented NUS and Singapore in FISU World University Chess Championship 2020 and FIDE World University Rapid Chess Championship 2021