

Education

Nanyang Technological University, Singapore (NTU)

Aug 2023 – May 2027

Bachelor of Electrical and Electronic Engineering, Honours (Highest Distinction)

- CGPA: 4.89/5.00 | Specialization: Data Science and Machine Learning
- Dean's List AY 23-24 and AY 24-25
- NTU President Research Scholar | NTU Science & Engineering Undergraduate Scholarship Recipient | Presenter at ICUR 2025

Research & Professional Experience

Shenzhen InnoX Academy, *Market Data Analyst Intern*

Dec 2025 – Feb 2026

- Direct the global product showcase strategy for CES 2026 (Los Angeles) by aligning technical features with market demands, directly enabling the startup team's successful brand launch and engagement.
- Integrate competitive monitoring and sentiment analysis using Tableau to visualize complex user behavior, providing the executive team with data-backed insights to de-risk global expansion decisions.

GlobalFoundries, *Data Scientist Intern*

May 2025 – Dec 2025

- Built scalable modular ETL pipelines for multi-month trace data processing with AWS S3, Boto3, PySpark, implementing Parquet and Snappy compression to reduce storage by 90% and accelerate data extraction by 97%.
- Collaborated with cross-functional teams including CVD and Etch module engineers to translate trace comparisons into actionable user requirements, bridging the gap between technical data models and operational adoption.
- Engineered a Trace-to-image pipeline converting 1D time-series sensor data into 2D Gramian Angular Field (GAF) images to leverage computer vision architectures for feature extraction.
- Developed a supervised CNN pipeline for fault classification using the transformed GAF images, achieving 99.0% accuracy across three tool types and outperforming traditional statistical methods by 20.6%.
- Designed a two-stage Guard-band + OC-SVM architecture for unsupervised fault detection to handle unlabeled anomalies, achieving 95.05% accuracy (0 false alarms) on the test set, outperforming traditional SPC methods by 14%.

A*STAR, *Healthcare Data Research Intern*

Jan 2025 – Apr 2025

- Project: Anonymization Workflows for Confidential Medical Datasets (SG National Healthcare Group Collab)
- Addressed the trade-off between data utility and patient privacy, a core challenge in observational healthcare data.
- Performed feature preservation analysis through rPPG-tool to optimize preprocessing for downstream AI performance.
- Presented findings on healthcare optimization workflows to clinical and technical stakeholders, influencing future data governance strategies.

Shanghai DAOBI Education Technology, *Data Science Instructor*

Jun 2024 – Dec 2024

- Delivered bilingual lectures on data science, SQL, and ML fundamentals, adapting content for diverse learner profiles.
- Created instructional materials that improved student engagement and contributed to a revenue increase of SGD 10,000+.

Academic Projects

NTU Undergraduate Research: AlzCare Smart Watch, *Team Leader & Product Designer*

Aug 2024 – May 2025

- Led a 3-member team to prototype an AI-powered wearable for dementia patients using Figma, conducting on-site user research and collaboration with SG Jamiyah Nursing Home to validate needs and refine technical specifications.
- Selected to present findings on healthcare innovation at The International Conference of Undergraduate Research (ICUR) 2025.

Hotel Booking Trends and Cancellation Forecast, *Team Leader of 4 Members*

Feb 2024 – Apr 2024

- Optimized model performance to 91% accuracy by integrating TensorFlow, L2 regularization, and Batch Normalization.
- Presented data-driven insights with visualizations to 50+ course instructors and peers.

Leadership / Co-Curricular Activities

NTU Institution of Engineering and Technology (IET), *Liaison Manager*

Jul 2024 – Present

- Facilitated strategic partnerships and company visits to industry giants (A*STAR, Nestlé, SBS Transit, GlobalFoundries), connecting the student body with corporate opportunities.

NTU Investment Interactive Club (IIC) Investment Academy, *Subcommittee*

Jul 2024 – Present

- Planned and executed key conferences including curating speaker panels and logistical arrangements, attracting 200+ participants.

CFLS Model United Nation Club (CFLS-MUN), *Academic Director*

Dec 2019 – Dec 2021

- Chaired the North-East MUN Conference (1,000+ participants) and led delegations to World MUN and Yale MUN.

Skills

- **Programming:** Python, PySpark, R, SQL (MySQL, NoSQL, MongoDB), C
- **Cloud & Big Data Tools:** AWS S3, SageMaker, Boto3, TensorFlow, Scikit-learn
- **Tools & Design:** Tableau, Figma, Jupyter Lab, NVivo
- **Language:** Fluent in English and Mandarin, Basic in French