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Education

Nanyang Technological University, Singapore (NTU)	Aug 2023 – May 2027

Bachelor of Electrical and Electronic Engineering, Honours (Highest Distinction)
- CGPA: 4.86/5.00 | Specialization: Data Science and Machine Learning
- Dean's List AY 23-24 and 24-25
- NTU President Research Scholar | NTU Science & Engineering Undergraduate Scholarship Recipient
- Relevant Modules: (1) Introduction to Data Science and Artificial Intelligence [Python]
  (2) Data Structures & Algorithms [Python] (3) Designing and Developing Database [MySQL, NoSQL]

Work Experience

GlobalFoundries, *Data Scientist Intern*	May 2025 – Dec 2025

- Built scalable modular data 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 from hours to 4–8 minutes.
- Collaborated with cross-functional teams including CVD and Etch module engineers in the technical documentation of trace comparison through user demand requirements for future adoption.
- Presented insights to module engineers and data science teams for the adoption of hybrid ML strategies, showcasing innovative problem-solving.
- Developed a supervised CNN pipeline for classification, achieving up to 99.0% accuracy across three tool types, outperforming traditional guard band methods by 20.6% and implemented one-class anomaly detection for unsupervised fault identification.

A*STAR, *Healthcare Data Pre-Processing Research Intern*	Jan 2025 – Apr 2025

- Co-managed the collaboration project by National Healthcare Group (NHG) and A*STAR with a group of 5 interns, to develop anonymization workflows for confidential medical datasets, ensuring regulatory compliance and model integrity.
- Crafted report summarising key insights for healthcare optimization workflows and presented findings to clinical and technical stakeholders for their consideration.
- Performed feature preservation analysis through rPPG-tool to optimize preprocessing for downstream AI performance.

Shanghai DAOBI Education Technology, *Data Science & Machine Learning 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 Experience on Campus (URECA)	Aug 2024 – May 2025

AlzCare Smart Watch (Team Leader of 3 Members)
- Led a 3-member team using Figma to prototype an AI-powered wearable for dementia patients with features like health monitoring and geofencing and presented at The International Conference of Undergraduate Research (ICUR) 2025.
- Collaborated with SG Jamiyah Nursing Home to translate customer needs into technical specifications and validate design concepts.

NTU Module: Introduction to Data Science and Artificial Intelligence	Feb 2024 – Apr 2024

Project: Hotel Booking Trends and Cancellation Forecast (Team Leader of 4 Members)
- Optimized model performance to 91% accuracy through the application of Python and ML models with the integration of TensorFlow, L2 regularization, and Batch Normalization.
- Documented methodology and presented findings with visualizations to 50+ course instructors and peers.

NTU-NBS Module: Designing and Developing Database	Aug 2023 – Nov 2023

Project: Electric Vehicles Transition Analysis (Team Leader of 5 Members)
- Conducted analysis of EV adoption trends and infrastructure needs in Singapore using MySQL and NoSQL(MongoDB).

Leadership / Co-Curricular Activities

NTU Institution of Engineering and Technology (IET), *Liaison Manager*	Jul 2024 – Present

- Coordinated company visits to A*STAR, Nestlé, SBS Transit, and GlobalFoundries, connecting students with industry professionals.

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.
- Trained 100+ members in resolution drafting and conference protocol, enhancing public speaking and diplomacy skills.

Skills

- **Programming & Database:** Python, R, C Language, MySQL, NoSQL, MongoDB
- **Software & UI/UX Design:** Figma, Jupyter Lab
- **Cloud & Big Data Tools:** AWS S3, SageMaker, Boto3, PySpark
- **Language:** Fluent in English and Mandarin, Basic in French
- **Personal Interest:** Piano, Golf, Swimming