

EDUCATION

Nanyang Technological University
Bachelor of Engineering (Electrical and Electronic Engineering)
Honours (Merit) (Expected)

Aug 2020 - Jun 2024

Relevant Modules: (1) Artificial Intelligence and Data Mining (2) Machine Learning Design and Application (3) Robotics and Automation (4) Information Security (5) Introduction to Data Science and Artificial Intelligence (6) Data Structures and Algorithms (7) From Computational Thinking to Programming

VIRTUAL TRAINING AND LEARNING & DEVELOPMENT

Coursera Relevant Modules (NTU Info Circle): **Machine Learning Specialization** – 3 course specialization, **Deep Learning Specialization** – 5 course specialization, **Google Data Analytics Professional Certificate** - 8 course specialization

INTERNSHIP EXPERIENCE

A-Star Institute of Infocomm Research
Machine Learning & AI Intelligence Intern

Jan 2024 - Jun 2024

- Building Explainable Machine Learning Models for Web 3.0 Applications.
- Developing Solidity-based NLP tool for smart contract generation from natural language instructions.
- Applied SHAP ML Framework for improved Large Language Model interpretability.
- Tested language model in customized Blockchain Tokenomics, ensuring adaptability to specific scenarios.

NTU-Continental Lab

Jan 2024 - Jun 2024

- Leveraged Machine Learning clustering technique on ROS and Gazebo Simulator for simulation and analysis of robotic system.

Atomionics Pte. Ltd.
Electronics Intern

May 2023 - Jul 2023

- Applied C Programming with ESP-32 Node MCU Microcontroller to construct and integrate an interlock protection system to protect Power Supply of Quantum Cold Atom Interferometry Gravimeter.
- Engineered PCB circuitry using the KiCad software for design and layout.

Airity Technology, San Francisco Bay Area
Electrical Engineering Intern

Jul 2022 - Dec 2022

- Selected as the **sole representative** from the Electrical and Electronic Engineering (EEE) cohort for a highly competitive **Overseas Entrepreneurship Program internship**.
- Executed full-cycle development of plasma generator prototype product, encompassing circuit building, assembly, and debugging.
- Involved comprehensive tasks like part selection, simulation, and board layout, integrating hardware components for final product completion.
- Analyzed data, conducted market research, and developed business plans for client and partner presentations, including grant management and customer interviews.

NTU Library, Student Assistant (Work Study Scheme)

Jul 2021 - Jan 2023

ACADEMIC PROJECTS/ MODULE & COMPETITION PROJECTS/ RESEARCH EXPERIENCE

NTU-EEE Final Year Project

Aug 2023 - May 2024

Design and Fabrication of Matrix-Switching Unit for Simultaneous Electrical Measurement of 2D Thermoelectric Materials

- Conducted an in-depth literature review about 2-D thermoelectric materials and measurement of power factor.
- Designed and fabricated **matrix-switching unit** for enabling simultaneous measurement of Seebeck coefficient and electrical conductivity of 2-D materials to determine power factor.
- Constructed thermoelectric device by fabricating 2-Dimensional material MoS₂ onto Si substrate.
- Programmed Python scripts to automate data acquisition from experimental setups, deriving Seebeck coefficient, electrical conductivity, and power factor.

NTU-EEE Module: Artificial Intelligence and Data Mining

Aug 2023 - Nov 2023

Sentimental Analysis of Hotel Reviews (Team Leader of 4 Members)

- Implemented **Python Programming** incorporating 4 Machine Learning Models (i.e., Simple RNN, GRU, LSTM, BERT) for prediction of unlabelled hotel reviews.

NTU-EEE Design and Innovation Project

Jan 2022 - Apr 2023

Fabrication of Vertical Stackings of Two-Dimensional Materials (Team Leader of 7 Members)

- Improved current economical method of **Vertical Stackings** of 2-D Heterostructures using graphene and MoS₂ at Nanoelectronics Lab 1, NTU.
- Implemented **C Programming (Arduino)** with Servo Motors to layer 2-D materials on Si Substrate and deterministically transfer 2-D materials onto substrate.
- Integrated Servo Motors, Arduino, and **GUI Application** to facilitate system controlling.

Nanyang Venture Formula

Jan 2023 - Mar 2023

Team Member of 25

- Chosen member of the prestigious Nanyang Venture Formula Team, specializing in electric car construction for Formula SAE Competitions.
- Applied **C Programming (Arduino)** to design, and create PCBs, Battery Management System, and Control & Electrical System of vehicle.

International Astronomic Search Collaboration (IASC) Campaign

Sep 2021 - Feb 2022

Exploration of New Asteroids (Team of 4 Members)

- Served as NTU representative for the Students for Exploration & Development of Space Club, engaged in asteroid discovery through in-depth analysis of space data provided by **IACS** in collaboration with **NASA**.

NTU-EEE Undergraduate Research Programme (UROP)

Aug 2021 - Dec 2021

Deep Learning for 3-D Printing

- Authored a 24-page survey paper and 6-page summary related to Deep Learning prospects in 3-D Printing.
- Collated information and evaluated potential applications of Deep Learning to improve 3-D printing.

NTU-EEE Module: Introduction to Data Science and Artificial Intelligence

Aug 2021 - Nov 2021

Implications of Covid-19 Cases on Global Stock Market (Team Leaders of 4 Members)

- Utilized **Python Programming** to implement Machine Learning models (Logistic Regression, Naive Bayes, XG Boost, Random Forest Classifier) for analyzing the impact of Covid-19 cases on global MNCs' stock markets.
- Investigated and interpreted results to understand the correlations between Covid-19 trends and stock market fluctuations.

LEADERSHIP / CO-CURRICULAR ACTIVITIES**NTU Cricket Club, Founder and Vice-President**

Mar 2022 - Present

- Created the NTU Cricket club for competitive and recreational purposes.
- Managing an 8-member core team and hosted events with 100+ people.

NTU Da Vinci 3D Printing & Robo Masters Club, Main Committee Member

Nov 2021 - Nov 2022

- Planned, organized, and executed workshop "Industrial Manipulators & Robot Programming" by inviting R&D Engineer from Panasonic to deliver lecture.

NTU Student Affairs Office, Uni Life Ambassador

Jan 2022 - Apr 2022

- Guided International & Exchange students to transit into NTU for smooth semester.

NTU-Escendo 2021, (NTU-EEE Competition), Group Leader

Jan 2021 - Jan 2021

- Spearheaded coordination and engagement with team of 7 participants among 10 teams; collaborated with team members in formulating and developing two functional prototypes within 24 hours.

SKILLS & CERTIFICATES

- Languages: English, Hindi, Tamil, and Sanskrit.
- Software Programming: C Language, Python, MATLAB, Arduino IDE, R, Solidify
- Software Applications: ROS, Gazebo Simulator, Altium 360, Altium Designer, LT-Spice, LabVIEW, Microsoft Office
- IT Tools / Frameworks / Libraries: Pandas, NumPy, PyTorch, TensorFlow, Power BI, SQL
- AI & Machine Learning: Logistic Regression, Naive bayes, XG Boost, Random Forest Classifier
- Operating Systems Environment: Linux, Mac, Windows, Ubuntu
- Certificates: (1) **Sustainable Development** Certificate - TN Govt., India (2) Certificate from **IASC** in Partnership with **NASA** (3) **Founder** of NTU Cricket Club Certificate from NTU Sports Club