**Aaryan Kandiah**

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**Professional Internship Availability: Jun 2025 to Dec 2025 (6 months)**

**EDUCATION**

**Nanyang Technological University** (NTU)Aug 2022 – **Dec 2025** (Expected)

* **Bachelor of Engineering (Electrical and Electronic Engineering)**
* **Honours (Distinction)** (Expected); current CGPA: 4.35 / 5.00
* Specialization: **Data Analysis and Machine Learning** (Expected)
* Relevant Modules: (1) *Introduction to Data Science and Artificial Intelligence* [**Python Programming**, – Pandas, NumPy, Seaborn, Matplotlib] (2) *Data Structures and Algorithms* (3) *Image Processing and Computer Vision* (4) Artificial Intelligence and Data Mining *Intelligence* [**Deep Learning, Natural Language Programming**]

**Virtual Training and Learning & Development**

* Coursera Relevant Module (Google): *Advanced Data Analytics Professional Certification*
* Amazon Web Services (AWS) Certification: *AI Practitioner*
* Coursera Relevant Module (DeepLearning.AI): *AI For Everyone*
* Coursera Relevant Module (Imperial College London): *Getting Started with TensorFlow 2*

**ACADEMIC PROJECTS / COMPETITION PROJECT / RESEARCH EXPERIENCE**

NTU-EEE Module: ***Introduction to Data Science and Artificial Intelligence***         Jan 2023 – May 2023

Module Project: ***US Traffic Accident Analysis and Predictions*** (Team of 4)

* Applied **Python Programming** to perform Exploratory Data Analysis and utilised 3 Machine Learning Models (i.e., Decision Tree Classification, Random Forest Classification and Support Vector Machine) for predicting location and severity of accidents.
* Concluded that Random Forest Classification was the ideal model with highest prediction accuracy and identified key prediction features including distance of affected road, latitude, humidity, and temperature.
* Proposed applying results of analysis to identify accident hotspots and enhance emergency response planning.

NTU-EEE Module: ***Artificial Intelligence and Data Mining*** Aug 2024 – Dec 2024

Module Project: ***Sentiment Analysis of Product Reviews*** (Team of 3)

* Designed and implemented a sentiment analysis pipeline using **Python Programming** and **Natural Language Programming** to classify product reviews, enhancing text classification accuracy by comparing Logistic Regression, LSTM, and fine-tuned BERT models.
* Processed raw text data using TF-IDF vectorization and word embeddings for feature extraction, enabling effective text representation and model training.
* Fine-tuned a BERT model for **sentiment classification**, achieving the highest accuracy at the cost of increased computational complexity and resource usage.
* Automated data handling from JSON input to CSV output, streamlining predictions and results storage for efficient analysis.

NTU URECA (Undergraduate Research Experience on Campus) Aug 2023 **–** June 2024

URECA Project: ***Fairness Analysis and Improvement for New Interpretable Machine Learning Architectures***

* Using **Python Programming** with machine learning frameworks (e.g., PyTorch, Scikit-Learn, NumPy) in **Linux** to apply fairness training on new machine learning architecture **Truth Table Net** (TTnet) for Convolutional Neural Network (CNN).
* Explored fairness, an increasingly vital facet of AI, to compare TTnet with against alternative machine learning approaches to reduce bias and prevent unfair treatment of different demographics.

**WORK EXPERIENCE**

**Manulife Financial Corporation, *Technology Audit Services Intern***  May 2023 – Jul 2023

* Worked on the SOX (Sarbanes-Oxley) audit and China market audit.
* Performed testing to evaluate evidence accuracy and reliability.
* Prepared comprehensive workpapers to document audit process, fact-findings, and conclusions.
* Programmed **Python Script** to traverse through git repositories to uncover potential data privacy issues.

**CO-CURRICULAR ACTIVITIES AND COMMUNITY SERVICE**

* **NTU -** **Machine Learning and Data Analytics Club - Projects Committee, *Member*** Aug 2023 – **Present**
* **NTU -** **Clean Energy Club – Technical Sub-Committee, *Member*** Aug 2023 – Dec 2024
* **NTU -Tamarind Hall Basketball, *Member*** Aug 2022 – Dec 2023

**SKILLS / HOBBIES**

* **Languages**: Proficient in English; conversant in Hindi and French
* **Software Programming**: Python, Java, C Language, MySQL
* **Software Applications**: Visual Studio Code, Microsoft Office 2022 (Excel, Word, PowerPoint, Outlook), Tableau
* **IT Tools / Frameworks / Libraries**: Pandas, NumPy, Seaborn, Matplotlib, TensorFlow 2, PyTorch, PyQt5
* **Hobbies**: Play Basketball & Table Tennis, Travelling, Reading, Software Coding