CHEN Kang Ming

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EDUCATION

Nanyang Technological University, Singapore   Aug 2020 – Jun 2024
Bachelor of Engineering (Computer Science)

- **Achieved Honours (Distinction) – Second-class Upper Honours equivalent**
- Conferred **President Research Scholar**
- **Elective Focus:** Artificial Intelligence and Data Science and Analytics
- **Relevant Modules:** Database System Principles, Natural Language Processing, Computer Security, Machine Learning, Artificial Intelligence

INTERNSHIP EXPERIENCES

Central Provident Fund Board (CPFB)   Jan 2023 - May 2023
Product Development Intern

- Spear-headed the initiation of the team's machine learning (ML)/large-language model (LLM) stack using Next.js and OpenAI GPT APIs, developing a conversational question- answering (QA) system prototype for CPF-related queries.
- Developed a website scraper using Selenium to extract, transform and load (ETL) public-facing information about the Board, for training and context-driving the QA prototype.
- Chaired talks for CPF staff, upper management and executives on the use of LLMs in the workplace, and developed a handbook on proficient, supervised LLM and Generative AI usage for circulation all across the Board.
- Engaged in full-stack application development leveraging Next.js and MongoDB, with deployment on Azure for a document-generation and templating product, streamlining workflow for multiple agencies and stakeholders across the Government.

ACADEMIC PROJECTS

Final Year Project – Crowd Estimation in Images   Sep 2023 - May 2024

- Worked on transformer-based crowd estimation models using Python and machine learning for Singapore-based crowd estimation evaluation and training
- Classified unstructured image data for training and evaluating the computer vision model, which leverages image recognition
- Achieved up to **33% increase in performance** from base model, with **quick inference times** and **high accuracy**

Machine Learning Project – Tackling the Zillow Zestimate   Aug 2023 - Nov 2023

- Worked on improving Zillow's Zestimate model for housing prices, employing a mixture of gradient-boosting and traditional machine learning models, using Python, TensorFlow and Keras
- Performed data ETL leveraging Pandas for feature engineering, and better coherence with the machine learning model
- Achieved **top 7% of submissions (93rd percentile)** based on competition leaderboard

Natural Language Processing Project - Question Classification   Aug 2023 - Nov 2023

- Worked on *word2vec* models such as Google-News in Python, as well as extracting, loading, and sanitizing of structured datasets
- Developed a question classifier leveraging recurrent neural networks (RNNs) such as Long Short-Term Memory (LSTM) and Gated Recurrent Units (GRU), obtaining **high validation and test accuracies** against test benchmarks

Advanced Software Engineering Project - DroneDetector   Aug 2022 - Nov 2022

- Developed an application using Android Studio SDK on pinpointing illegal drone activity via real-time image recognition
- Initialized of the image recognition engine using Python and the YOLOv5 library, and live demonstration of the application

Software Engineering Project - PaktorGoWhere   Jan 2022 - May 2022

- Developed a web application using React.js and a Firebase backend, focused on planning daily itineraries for couples
- Engaged in front-end development with React.js and CSS, and overall demonstration of the web application

LEADERSHIP AND CO-CURRICULAR ACTIVITIES

Jam Band Captain, Tanjong Hall of Residence   Sep 2021 - May 2024

- In charge of the overall planning, logistics and organization of events and practice for the Jam Band
- Led Jam Band members through various school- and organizational-level performances with stellar feedback from organizations

SKILLS

Languages: Proficient in English and Chinese, conversant in Cantonese, basic understanding in Japanese and French
Programming: Python, JavaScript, TypeScript, C/C++, SQL, Java, HTML/CSS
Frameworks and Applications: React.js, Next.js, MongoDB, Firebase, MySQL, Pandas, Docker, TensorFlow, Keras, PyTorch