CHEN Kang Ming

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EDUCATION

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

- **Achieved Honours (Distinction), conferred President Research Scholar**
- **Elective Focus:** Artificial Intelligence and Data Science and Analytics
- **Relevant Modules:** Database System Principles, Natural Language Processing, Artificial Intelligence

WORK EXPERIENCES

Central Provident Fund Board (CPFB) Feb 2025 - Present
Full-stack Software Engineer

- Spearheading Generative-AI solutions within the Board, such as leveraging agentic workflows and MCP servers
- Lead developer of docCentral (Next.js/MongoDB), serving 80+ government agencies, digitizing hospital forms and improving productivity by **50%**
- Developed complex logic in Python for calculations involving CPF schemes, currently in use within the CPF website

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.
- 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 across the Board.

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

Undergraduate Research Experience on Campus (URECA) – Offline Reinforcement Learning Aug 2021 - Jun 2022

- Conferred 'President Research Scholar' upon completing URECA with distinction
- Engaged in research and meta-analysis of various offline reinforcement learning algorithms, providing suggestions on future expansions and use-cases with a focus on scalability and real-world practical solutions

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, SQL
Frameworks and Applications: React, MongoDB, PostgresSQL, MCP, TensorFlow, Keras, PyTorch, AWS, Docker