Kelvin Wey Han Chan

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EDUCATION

University of Cambridge   *Oct 2022 – Jun 2023*
- MPhil Advanced Computer Science (Natural Language Processing)

University of Malaya   *Feb 2018 – Feb 2022*
- BEng Electrical Engineering (First Class Honours)

Programming Languages/Frameworks: Python, PyTorch, TensorFlow, C++, SQL, Git, AzureML, Databricks, Docker, MLFlow

RESEARCH PROJECTS

Grammar Error Correction for Code-switched Sentences (LREC-COLING 2024)   *Dec 2022 – Jun 2023*
- Proposed a linguistically constrained synthetic data generation method for code-switch grammar error correction (GEC), improving edit-based models by +1.57% $F_{0.5}$ over GECTOR.
- Supervisors: Dr. Zheng Yuan & Dr. Chris Bryant, University of Cambridge

Syntactic Inversion for Zero-shot Cross-lingual NLP in Chatbots   *Sep 2020 – Jun 2021*
- Explored head-directionality inversion and SVO reordering as data augmentation techniques, boosting zero-shot cross-lingual sentence classification accuracy by +3.9% F_1 over the state of the art.
- Supervisor: Prof. Ir. Dr. Chuah Joon Huang, University of Malaya

WORK EXPERIENCE

Data Scientist, Shell   *Aug 2023 – Present*
- Designed AzureML pipeline for training and quantising computer vision models, achieving 20× lower inference energy use without significant accuracy loss.
- Deployed an agentic AI chatbot to autonomously resolve 84% of routine queries and transactions, cutting average customer service resolution times by 68% via adaptive conversation flows.
- Implemented a comprehensive evaluation framework for the AI chatbot to assess response quality, safety compliance and resilience to jailbreak attempts.
- Built a GenAI-powered pipeline to automatically produce post-hoc explainability reports and market outlook summaries, enhancing interpretability and stakeholder confidence in AI-driven decisions.

Data Science Intern, NXP Semiconductors   *Jun 2021 – Oct 2021*
- Applied an embedding-based language model to cluster historical error logs and technician annotations, creating a high-quality labelled dataset for evaluating hardware failure modes.
- Built time-series regression model to predict testing yield with 0.3% MAE and forecast component-specific failures two production lots in advance, enabling proactive intervention.

Firmware Engineering Intern, Western Digital   *Jun 2020 – Sep 2020*
- Developed web-based visualisation tools to map bad sectors in hard disks, reducing average debugging time by 43 minutes per case.
- Delivered new features and resolved format-related bugs for enterprise-grade storage products.

Data Science Intern, The Center of Applied Data Science   *Jan 2018 – Feb 2018*
- Built Python web-scraper for 50k+ job postings; performed keyword clustering and statistical analysis to map in-demand skills to salaries offered by companies in Malaysia.

VOLUNTEER EXPERIENCE

Co-founder & Operations Lead, BuddySings   *Jun 2018 – Present*
- Produced and arranged six original songs, leveraging content optimisation to boost reach by 67.9% in six months.
- Developed and deployed a fundraising microsite with Stripe payments and Google Analytics integration, raising US$10k in funding.
- Applied data-driven audience targeting to expand engagement and measure campaign performance.

Secretary & Chief Communications Officer, Emerging Leaders Asia   *Jun 2021 – Aug 2023*
- Collaborated with a 15-member cross-border team to build a talent pipeline across Asia, fostering partnerships with universities and industry.
- Led a 3-person communications team to strengthen organisational branding through targeted outreach.
- Launched a bi-monthly newsletter to maintain engagement with a talent pool of 500+ emerging leaders.

TRAINING AND CERTIFICATIONS

Data Science Nanodegree	*Udacity*
Databricks Certified Generative AI Engineer Associate	*Databricks*
Green Software for Practitioners (LFC131)	*The Linux Foundation*
Train and manage a machine learning model with AzureML (DP-3007)	*Microsoft*
Natural Language Processing with Classification and Vector Spaces	*deeplearning.ai*
Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization	*deeplearning.ai*
Neural Networks and Deep Learning	*deeplearning.ai*
Deep Learning Fundamentals	*IBM Cognitive Class*
AWS Fundamentals: Going Cloud-Native	*Amazon Web Services*
The Fundamentals of Digital Marketing	*Google Digital Garage*