TIGER YOTSAWAT

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EDUCATION

University College London | MSc Data Science & Machine Learning   **01 Sep 2024 − Present**

- Modules, 1st expected: Statistical Natural Language Processing, Bayesian Deep Learning, Bioinformatics, Open-Endedness & General Intelligence, Supervised Learning, Machine Vision, Applied Machine Learning

University of Cambridge | MA, MSci, BA Hons Natural Sciences (Physics)   **01 Oct 2016 − 30 Jun 2020**

- Module highlights, 2.2: Advanced Statistical Mechanics, Quantum Information, Particle Physics, Relativistic Astrophysics
- Scholarship: Cambridge Thai Foundation and Stephen Fleet Memorial Scholarship

INDUSTRIAL EXPERIENCE

Machine Learning & Data Scientist | TMBThanachart Bank | *NLP, scikit-learn, Power BI*   **01 Mar 2022 − 05 Jul 2024**

- Automated parsing of over 3,000 SQL scripts to map data flow in legacy pipelines, enabling rapid diagnosis of data issues.
- Employed natural language processing (NLP) techniques such as tokenisation and N-grams to identify and classify customer complaints, reducing manual effort.
- Created a personalised mutual funds monitoring dashboard on Power BI, widely adopted by sales staff across the country and nominated for internal awards.
- Engineered features using insights gained from analysis of bad actor behaviours, resulting in improved detection rules and a twofold boost in detection model precision/recall.
- Optimised a frequently used SQL query, reducing runtime from 1h to 15min.
- Led IDE training sessions and introduced a Git workflow, raising team coding standards and collaboration.

Full-Stack Developer | Ankamen Silver | *Typescript, Figma, AWS, Cloud*   **01 Jan 2021 − 28 Feb 2022**

- Designed online store showcasing silver jewellery products using Figma.
- Built a scalable ERP web app with Figma, Next.js, and MongoDB for managing orders, invoicing, and customer data.
- Managed domain name, SSL certificate, and deployment on AWS S3, Route 53, and CloudFront.

RESEARCH & PROJECTS

Perfect Prompt: Systematic LLM Benchmarking | *Docker, Typescript, NextJS, MongoDB, LLM*

- Developing a full-stack benchmarking platform for evaluating LLMs, enabling systematic comparison across OpenAI, DeepSeek, Mistral, and Claude.
- Solutions on the market such as Amazon Bedrock or Azure AI Studio either have high cost, steep learning curve, or lack of multi-provider support.

Innovation Engine: AI-Driven Creativity | University College London | *PyTorch, LLM*

- Developing a generative AI system that applies open-ended evolution algorithm to create novel artworks, with the ultimate aim of automating the human creative process in domains such as art, game design, and scientific research.
- Using Llama-based models to predict aesthetic interestingness in procedurally generated images.

Faithfulness in LLMs | University College London | *Hugging Face, Transformer, NLP*

- Developing explainability techniques for Transformer-based large language models (LLMs), analysing token attribution and attention patterns to evaluate generated explanation of model's decision making process.
- Investigating faithfulness metrics using Counterfactual Test to detect hidden biases, such as gender bias in hiring decisions.

UCL Computational Cancer Collaboratorium Hackathon 2024 | *Machine Vision*

- Developed a vision model to automate segmentation and tracking of cancer cells sample undergoing mitosis (division), allowing effects of treatment drugs on division cycle to be monitored and saving researchers hours of manual tracking effort.

Pocket Travel: AI Trip Planner | Mistral AI London Hackathon, 2024 | *LLM, NextJS, FastAPI, SERPApi*

- Developed a personalised travel itinerary generator using Mistral AI LLM.
- Scraped top local attractions and restaurants from Google through SERPApi, using the LLM as a decision-making engine to review ratings, incorporate user preferences, and plan timing to visit each location based on opening hours.
- Built a human-in-the-loop workflow to allow users to selectively edit AI-generated itineraries, improving user engagement.

TECHNICAL SKILLS

Machine Learning: Prompt Engineering, PyTorch, OpenCV, Contrastive Learning
Natural Language Processing: Hugging Face Transformers, Attention Mechanisms, Named Entity Recognition
Data Science: Power BI, Tableau, scikit-learn, Databricks
Software Engineering: Docker, Git, Next.js, FastAPI, MongoDB, REST APIs
Cloud: AWS CloudFront, AWS Route 53, AWS S3, Heroku