KENTON, KING-LONG TANG

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EDUCATION

University of Edinburgh, BSc in Artificial Intelligence and Computer Science *September 2022 - May 2026*

- Expected **First Class Honors** (Average: **87%**)
- Courses: Functional Programming, Object-Oriented Programming, Algorithms and Data Structures, Probability and Discrete Mathematics, Data Science, Computer System, Software Engineering, Reasoning and Agents

University of Pennsylvania, Year Abroad Exchange (Major: CIS) *August 2024 - May 2025*

- Courses: Natural Language Processing, Computer and Network Security, Maths of Machine Learning, Finance

PROJECTS

Robust Dialogue Summarization on SAMSum | *PyTorch, Hugging Face* *Link to Github*

- Conducted a comprehensive project evaluating the robustness and cross-domain generalization capabilities of *DistilBART-cnn-12-6* for abstractive dialogue summarization, leveraging the *SAMSum* (dialogue-based) dataset
- Implemented a fine-tuning strategy on the *SAMSum* dataset to enhance in-domain performance, followed by out-of-domain evaluation on the *XSum* dataset, using metrics such as ROUGE to assess performance
- Applied advanced training techniques such as **learning rate scheduling**, **weight decay adjustments**, and **early stopping** to optimize the training process, ensuring effective fine-tuning and minimizing the risk of overfitting
- Achieved robust performance in dialogue summarization, with the distilled model attaining a **ROUGE-1 score of 39.89**, closely aligning with the benchmark performance of the *bart-large* models, which score around 40.891

Facebook Clone | *React.js, Express.js, MongoDB, CSS* *Link to Github*

- Architected a full-stack social media platform utilizing the *MERN* stack, featuring robust user authentication and *CRUD* operations for posts, including image uploads handled by *Multer* middleware, real-time likes, comments, and deletions, with additional functionalities like dynamic friend management and profile viewing capabilities
- Engineered a responsive front-end using *React.js*, ensuring cross-device compatibility, incorporating advanced *UI/UX* practices such as a Light/Dark mode toggle with persistent state across sessions
- Leveraged *Redux* for scalable state management and integrated *RESTful API endpoints* with *Express.js* to ensure reliable data flow and storage, supporting a scalable user base of **1,000+** simulated users

Ultramarathon Data Analysis | *Numpy, Pandas, Matplotlib, scikit-learn, Kaggle* *Link to Github*

- Conducted a comprehensive analysis of ultramarathon participation and performance using a dataset spanning over two centuries, focusing on trends such as the impact of historical events and gender dynamics
- Engineered features and developed a predictive model using *Random Forest Classifier*, achieving an **R^2 score of 0.689**, to forecast ultramarathon finishing times based on variables like event distance, athlete age, and gender

ADDITIONAL EXPERIENCES

Optiver Challenge @ HacktheBurgh 2024 | *Numpy, Pandas, Tensorflow, scipy* *March 2024*

- Participated in HacktheBurgh 2024 sponsored by Optiver, collaborating within a team of five to refine an existing market-making strategy aimed at dynamically responding to social media feeds
- Leveraged the *facebook/bart-large-mnli* model for advanced Natural Language Processing, facilitating precise classification of tweets to predict their impact on specific stock movements

InfPALS @ School of Informatics, University of Edinburgh *September 2023 - May 2024*

- Delivered course material on Functional Programming and organized workshops on industry skills such as *Command Line*, *Git & GitHub*, Technical Interview Preparations, and Portfolio Projects

TECHNOLOGIES

Language: *C, C++, Java, Python, JavaScript, Haskell, Pascal, MIPS, HTML, CSS, SQL, pddl*
Full Stack: *React.js, Redux, React Native, Node.js, Express.js, Java Spring Boot, MySQL, MongoDB, Firebase*
Machine Learning: *Numpy, Pandas, Matplotlib, Tensorflow, PyTorch, scikit-learn, keras, nltk, transformers, seaborn*