KEYU LONG

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SUMMARY

Data Science enthusiast with a profound grounding in deep learning and comprehensive understanding of the end-to-end data science process, including large-scale data handling, problem-solving, model deployment, and analysis. Eager to leverage technology for the greater good, I am on the lookout for a role in a progressive company where I can contribute to impactful projects and drive social change through innovative, data-driven strategies.

EDUCATION

University of California, San Diego (UCSD) **San Diego, CA** Expected Apr 2024
Bachelor of Science in Data Science GPA: 3.86
Relevant Coursework: *Deep Learning, Recommender System and Web Mining, Probabilistic Modeling and ML, Data Analysis and Inference*

Huazhong University of Science and Technology (HUST) **Wuhan, China** Sep 2020 - Jun 2021
Visiting Student in Computer Science
Relevant Coursework: *Data Structure, Discrete Mathematics, Algorithms Design in C*

EXPERIENCE AND PROJECTS

Divisive Normalization: Biological Inspired Neural Network Structure Mar 2023 - Present

Undergraduate Researcher in Gary Cottrell's 'GURU' lab at UCSD

- Drawing inspiration from primate vision processes, integrated divisive normalization as both an activation and normalization layer using PyTorch.
- Surpassed the performance of ReLU as activation function by 20% in shallow Convolutional Neural Networks.

Data Visualization of China COVID-19 Opening Mar 2023 - Jun 2023

- Extracted online data and employed D3 JavaScript to create an interactive data visualization platform.
- Incorporated diverse graph types to reveal the relationships between different key words and geographical locations for depicting various facets and narratives of a global event.
- https://kulcoder.github.io/baidu_search_trend/

Recommender Systems and Natural Language Processing on Amazon Reviews Jan 2023 - Mar 2023

- Conducted in-depth analysis of quantitative, categorical, and textual data from the Amazon reviews dataset to understand different features' influence on review ratings.
- Engineered a recommender system using Multi-Layer Perceptrons to predict star ratings, achieving a 64% reduction in mean squared loss compared to similarity model.
- Fine-tuned pre-trained BERT model on NLP classification, achieving a 25% increase in accuracy over Tf-idf model.

Customized Multi-Layer-Perceptrons on GPU with CuPy Oct 2022 - Dec 2022

- Applied the MLP model from scratch to image classification tasks using CIFAR-10 (achieved 50% accuracy) and MNIST (attained 97% accuracy) datasets .

SKILLS

Programming	Python, Java, C, JavaScript, SQL, Git, AWS
Data Science	NumPy, Pandas, Spark
Machine Learning	Scikit-Learn, XGBoost, Recommender System
Deep Learning	Pytorch, CNN, RNN-LSTM, Transformers, NLP, CV
Language	Mandarin (Native), English (Professional)