KEYU LONG

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OBJECTIVE

As a passionate believer in the potential of machine learning and deep learning to make positive impact on societies and people's lives, I am seeking research opportunities to explore and strengthen my machine learning techniques. My goal is to build a career toward exploring more potential applications of machine learning and deep learning.

EDUCATION

University of California, San Diego (UCSD) **San Diego, CA** Expected June 2024
Bachelor of 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** September 2020 - June 2021
Visiting Student in Computer Science
Relevant Coursework: Data Structure, Discrete Mathematics, Algorithms Design in C

EXPERIENCE AND PROJECTS

Undergraduate Researcher at GURU Mar 2023 - Present

- Developing new ideas within the field of Deep Learning under Gary Cottrell's lab 'GURU'.
- Inspired from processes for primate vision, implemented divisive normalization as activation and normalization layer with PyTorch.
- Defeated the performance of ReLU at shallow Convolutional Neural Networks.

Comprehensive Amazon Reviews Project Jan 2023 - Mar 2023

- Analyzed quantative, categorical and text data on Amazon Reviews Dataset.
- Built recommender system on star ratings with Multi-Layer-Perceptrons model which decreased mean squared loss by 64% to baseline similarity based model.
- Fine-tuned pre-trained BERT model on NLP classification task which increased accuracy by 25% to baseline Tf-idf based model.

Google Map Project Nov 2022 - Jan 2023

- Completed a full life-cycle data science project, from data collection and cleaning to model building and deployment based on Google Map Reviews Dataset.
- Applied classification problem on NLP and location data with Multi-Layer-Perceptrons, increased accuracy by 48% compares to baseline Random Forest model.

Handmade Multi-Layer-Perceptrons Oct 2022 - Dec 2022

- Implemented back-propagation, stochastic gradient descent, activation functions, and regularization method.
- Deployed MLP model on image classification problem with CIFAR-10 (accuracy 50%), MNIST(accuracy 97%) datasets.

SKILLS

Technical Skills	SQL, Python(NumPy, Pandas, Scikit-Learn, PyTorch, TensorFlow, Spark), Java, C, R, JavaScript(D3, React), Git, AWS Cloud
Soft Skills	Optimism, Critical Thinking, Leadership, Communication
Machine Learning Tasks	Tabular Data Prediction, Recommender System, NLP, CV
Machine Learning Algorithms	SVM, XGBoost, CNN, RNN-LSTM, Transformers