Spencer Stice

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Education

University of California, Los Angeles (UCLA) - Henry Samueli School of Engineering — Los Angeles, CA
Master of Science in Computer Science — October 2024 - June 2025 (Expected)
Focus on computer architecture and AI/ML, TA for embedded ML IoT class, ML researcher

University of California, Los Angeles (UCLA) - Henry Samueli School of Engineering — Los Angeles, CA
Bachelor of Science in Computer Engineering and Mathematics, GPA 3.901 — October 2020 - June 2024
Graduated with honors, IEEE-HKN membership chair, mathematics minor
Coursework: Algorithms, OS, Architecture, DL, Computer Vision, NLP, Blockchain, Game Theory, Graph Theory

Skills

Programming Languages: Python, Java, C++/C, SystemVerilog
Technologies/Concepts:
Discriminative + Generative ML (Tensorflow, PyTorch, MLP, CNN, LSTM/RNN, GAN, VAE, Transformers, LLMs, Diffusion), Genetic Algorithms, Kalman Filters, FPGAs, Blockchain (Byzantine Broadcast/Agreement, PoW, PoS, Smart Contracts, Selfish Mining, Secure Multi-Party Computation)
Libraries/Tools:
Matplotlib, Numpy, Pandas, Huggingface, Weights and Biases, Git, Linux, Postman, Intel Quartus Prime, ModelSim

Research Experience

UCLA Large Scale Machine Learning Group (BigML) Lab — Los Angeles, CA
Skills: Fine-tuning LLMs, Nvidia GPUs — April 2024 to Present
-Researching techniques to prevent LLMs from losing their RLHF alignment during task-specific fine tuning
-Evaluating ideas from neural network interpretability and pruning to preserve the model alignment

Industry Experience

AI Research Intern: Perceptronics Solutions — El Segundo, CA
Skills: Tensorflow, Neural Networks, Control Theory (Kalman Filters), Research — June 2023 - September 2023
-Conducted review of research papers in search for a potential solution to a location accuracy problem associated with an embedded positioning chip
- Implemented one such paper, improving location accuracy in GPS-denied environments by over 55% using an RNN to perform time series forecasting of the expected location error and correcting for it

Software and DDR5 Memory Engineer Intern: Intel Corporation — Folsom, CA
Skills: DDR5, Python, Genetic Algorithms — June 2022 - December 2022
-Performed post-silicon validation on server-grade DDR5 DRAM and wrote a genetic algorithm in python to find optimal duty cycle adjust settings to minimize electrical jitter before validating, reducing the average search time by ~80% and discovering settings with ~50% less electrical jitter than previous methods
-Conducted over 13,000 jitter distribution tests to assess the program's performance potential, leading to the submission of an invention disclosure form at Intel

Projects

Quill: ChatGPT-powered Chrome Extension
Skills/Technologies: OpenAI API, Startups
- CEO of 4 person startup building a Chrome extension integrating ChatGPT into the web browser
- Attained over 700 users, pitched to co-founder of Google AdSense and other prominent LA VCs for seed funding

EEG 4-Class Motor Classification via Recurrent and Convolutional Networks
Skills/Technologies: PyTorch, RNNs, CNNs
- Designed and implemented various NN architectures to classify EEG data into 4 classes of motor activity
- Performed hyperparameter tuning and experimentation with various architectures to optimize performance
- Achieved 69.3 % test accuracy using a convolutional network with L2 regularization