Elvin Li

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Education

University of California - San Diego — San Diego, CA
Mathematics - Computer Science (B.S.) | GPA: 3.9/4.0 — *Expected: 2026*

Relevant Coursework: Advanced Data Structures & Algorithm Design, Computer Organization, Machine Learning, AI Algorithms, NLP, Stochastic Processes, Honors Real Analysis, Convex & Non-Convex Optimization, Linear Algebra

Machine Learning Research Publications

IEEE-IoTJ'25 (Under Review): "Continual Anomaly Detection for Enhanced Learning in IoT Intrusion Detection"
AAAI'25 AICS: "Self-Supervised Anomaly Detection Framework for Intrusion Detection". [Link]
IEEE-SafeThings'25 (Best Paper): "Dynamic Defense Selection for Enhancing Machine Learning-based Intrusion Detection Against Adversarial Attacks" [Link]
IEEE-CSR'24: "Rigorous Evaluation of Machine Learning Intrusion Detection Against Adversarial Attacks" [Link]

Experience

Amazon — Jun 2025 – Sep 2025
Software Development Engineering Intern — *Seattle, WA*

- Building software for Alexa+ AI under the Alexa Audio team, engineering infrastructure to integrate ML frameworks into existing Alexa services.
- Developing an internal time series modeling service leveraging statistical and deep learning methods to forecast service traffic and diagnose throttling, automating backend scaling to reduce engineering time efforts by 80%.

Systems Energy and Efficiency Lab - UCSD — Oct 2023 – Jun 2025
Machine Learning Research Intern — *San Diego, CA*

- Researching applications of deep learning models in detecting cybersecurity threats for IIoT.
- (**AAAI'25 First Author**) Developed a novel self-supervised machine learning framework in leveraging masked autoencoders for tabular network intrusion data, beating state-of-the-art models by 23.5% F1-Score .
- (**IEEE-IoTJ'25 First Author**) Created a new continual learning pipeline for anomaly detection, enabling engineers to optimally update ML models in real-word scenarios for new data adaptation.
- Engineered threat detection models through PyTorch and Scikit-Learn including Random Forests, kNNs, Deep Neural Networks, as well as complex autoencoder structures with up to 99% accuracy.

Scripps Institution of Oceanography — Sep 2023 – Jun 2024
Natural Language Processing Research Intern — *San Diego, CA*

- Implemented statistical learning models (KNN, XGBoost, etc.) and fine-tuned large language models (BERT, GPT-4) on climate corpora, creating climate topic classifiers for regional analysis of prevalent climate issues.
- Curated and preprocessed large-scale climate text datasets, including cleaning, tokenization, and vectorization, to optimize input quality for LLM-based topic classification.

Activities

Y Combinator AI Startup School | *Attendee*

- Selected as 1 of 2500 candidates worldwide to participate in the original YC AI Startup School, receiving talks from AI industry leaders on insights and growth within various companies.

Stanford University | *Code in Place Teaching Assistant*

- Led live weekly programming lessons for CS106A (Programming Methodologies), facilitating a learning environment for a cohort of 15 students on introductory data structures and programming principles.

Triton NeuroTech | *Machine Learning Team*

- Developed an LSTM with 90% accuracy for the Neural Prosthetics Group, effectively utilizing EMG technology to translate muscle signals into robotic movements for prosthetic limbs.

Technical Skills

Languages: Python, C/C++, Java, JavaScript, Assembly (ARM), MatLab, SQL, HTML/CSS
Machine Learning: PyTorch, TensorFlow/Keras, Scikit-Learn, Pandas, NumPy, Matplotlib, OpenCV, HuggingFace
Developer Frameworks: React.js/Next.js, Flask, FastAPI, SQLite, PostgreSQL, Supabase
Developer Tools: Git, Jupyter Notebook, Visual Studio Code, Vim, Kubernetes, Docker