Elvin Li

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Education

University of California - San Diego — San Diego, CA
Mathematics - Computer Science (B.S.) | GPA: 3.90/4.00 — *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 under the Alexa+ team, engineering infrastructure to integrate ML pipelines and new generative AI frameworks into existing Alexa devices.
- Developing an internal time series modeling service leveraging statistical and deep learning methods to forecast API TPS and diagnose traffic throttling, automating resource scaling to reduce manual developer 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