

Spencer Levine

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EXPERIENCE

DS Systems, Remote — Machine Learning Engineer Intern | August 2025 - September 2025

- Led a 7-person cross-functional team that delivered a healthcare fraud-detection prototype achieving ~95% accuracy, 0.90 F1-score and ~85% fraud recall on holdout data. Trained, validated, and tested classification models on 12,930 healthcare claims while coordinating sprint tasks, reviews, and delivery milestones.
- Built a full-stack analytics dashboard (HTML, CSS, JavaScript, Bootstrap) for model explainability and decision support, enabling prioritization of high-risk cases
- Led meetings and presented proof of concept to the entire company

California State University, Northridge — Undergraduate Research Assistant in Compilers & Programming Languages | Nov 2025 – Present

- Research under Prof. Kyle Dewey in programming languages, compilers, and automated testing
- Building a small programming language and compiler to study correctness and testability
- Developing unit and property-based tests to improve reliability and bug detection, focusing on automated testing frameworks and correctness guarantees
- Work contributes to a research codebase for experimental language and compiler evaluation

PROJECTS

Storm44 — AI-Powered Study Tool (Capstone)

- Developed an AI-powered study platform that converts YouTube videos, PDFs, and notes into flashcards, quizzes, and games to help students study more efficiently using a cloud-hosted RAG pipeline and PostgreSQL
- Integrated an AI tutor pipeline for personalized study assistance, supporting content ingestion, transformation, and interactive feedback

Smart Energy Management — Deep Reinforcement Learning HVAC Optimization

- Developed a deep reinforcement learning agent (PPO/DQN) to optimize HVAC energy usage in a simulated commercial building environment, targeting 10–20% reduction in energy cost vs rule-based baseline control; monitored training using TensorBoard.
- Built a custom OpenAI Gym-style environment modeling temperature dynamics, occupancy patterns, and energy pricing; trained and evaluated policies using PyTorch and Stable-Baselines3.

Instacart Snack Department Analysis — Data Mining

- Performed exploratory data analysis and pattern discovery on the Instacart dataset focusing on snack department purchasing behavior.

SurfHQ — Surf Community & Wave/Beach Recommendation Platform

- Built a full-stack surf discovery platform that enables users to locate, review, and compare surf spots through an interactive map, improving surf-spot discovery, trip planning, and user experience. It also has a surf feed and marketplace.

EDUCATION

California State University, Northridge — B.S. Computer Science | Aug 2023 – May 2026

Los Angeles Pierce College — A.A. Computer Science | Aug 2021 – May 2023

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, HTML, CSS, SQL, C++, C, C#, Scala, Swift

Frameworks & Libraries: PyTorch, Stable-Baselines3, OpenAI Gym, Sentence-Transformers, RAGAS, FastAPI, Scikit-learn, XGBoost, Pandas, Spring Boot, Leaflet.js, Bootstrap, Matplotlib, Seaborn

Tools & Platforms: Git, GitHub, Azure, REST APIs, PostgreSQL, TensorBoard, Hugging Face, Kaggle, Jira, Node.js, Stripe, MySQL Workbench, MySQLServer, MySQLConnector, JavaFX