Alexander Hamidi

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Education

University of California, San Diego Expected 2026

Bachelor of Science, Computer Science – GPA: 4.00 *La Jolla, CA*

- Coursework: Deep Learning, Computer Architecture, Machine Learning, Digital Design, Software Engineering
- Extracurriculars: Triton Robotics, SDx (Startup Accelerator) Competitive Programming Club (ICPC, 2nd Regionally)

Experience

AI Engineer June 2025 – Present

Clado (YC X25) *San Francisco, CA*

- Developed ML model optimization pipeline for large-scale search system processing 1B+ profiles (10TB data), reducing inference latency by 97% with multithreading and achieving 10% precision and 20% recall improvements
- Built live RL system to continuously improve search models using user feedback, increasing relevancy by 45% and reducing prediction errors by 3x through online model adaptation

Software Development Engineer Intern May 2025 – June 2025

AWS *Seattle, WA*

- Wrote Python scripts to automate AWS service setup in new regions, eliminating 60% of manual configuration steps and helping the team launch services in 15+ regions faster with fewer errors
- Developed distributed validation frameworks using Linux containers to simulate and test service configurations before regional rollouts, achieving 95% accuracy in predicting deployment failures and reducing rollback incidents by 80%

Robotics Software Engineer October 2024 – Present

Lunon Robotics *La Jolla, CA*

- Developed OpenCV-based detection algorithms for an autonomous solar panel cleaning robot, achieving 95% accuracy in obstacle detection under varied conditions; integrated algorithms into the robot's ROS-based control system
- Trained a deep learning model with TensorFlow to classify dirt types with 90%+ accuracy, enabling dynamic water pressure adjustments that reduced cleaning resource usage by 25% and time by 10%

Undergraduate Researcher February 2025 – Present

University of California, San Diego *La Jolla, CA*

- Designed a framework using Python and LangGraph for automated construction and execution of AI agent workflows from user prompts, enabling structured multi-step reasoning and specialist-powered decision-making
- Built a pipeline to fine-tune Gemma-2b with domain-specific datasets and techniques, achieving 7% accuracy and 300% cost improvements over single-LLM systems on diverse agentic benchmarks

Software Engineering Intern July 2024 – November 2024

University of California, San Diego *La Jolla, CA*

- Improved student engagement by 12% through algorithmic contributions to TritonGPT, a RAG-powered AI agent providing academic and personal assistance to UCSD students, researchers, and faculty.
- Developed and maintained high-performance RESTful APIs, supporting microservices architecture with 99.9% uptime

Research Assistant March 2024 – June 2024

Cal State University, Los Angeles *Los Angeles, CA*

- Leveraged Python and BioPython to integrate a decision tree classifier capable of analyzing large-scale biochemical datasets, achieving an 87% accuracy rate in predicting oxidation-susceptible protein thiols
- Built app supporting multi-format data I/O and visualization, increasing researcher engagement by 30%

Projects

Neural Physics World Model | *Python, PyTorch, Linux, Git*

- Built a diffusion-based world model in PyTorch to predict robot motion dynamics, training on 50K simulation episodes to achieve 92% accuracy in predicting object trajectories over 5-second horizons
- Implemented autoregressive simulator using transformers to reduce domain transfer error by 35% on robot arm tasks
- Developed data pipeline in Python to process physics engine outputs and real sensor data, enabling continual learning

Technical Skills

Languages: Python, C++ (C++14/17/20), C, Java, TypeScript/JavaScript, SQL, ARM Assembly, Bash, Git

Engineering Concepts: Physics Engines, Linear Algebra, Data Structures, Algorithms, Multithreading

Libraries and Tools: PyTorch, NumPy, ROS, Linux, OpenCV, Git, Linux, AWS, Docker, VSCode, GCC, GDB, Valgrind, CMake