

Brandon Lo

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EDUCATION

University of California, Los Angeles (UCLA)

Los Angeles, California

Bachelor of Science in Computer Science and Engineering - GPA: 3.75

Expected Jun 2025

- **Relevant coursework:** Algorithms, Data Structures, Software Construction, Object-Oriented Programming, Operating Systems, Computer Organization, Theory of Computation, Data Science, Machine Learning, Circuits and Design, AI

SKILLS

Languages: Python, Java, JavaScript, TypeScript, C++, C, C#, Golang, Swift, HTML, CSS, Verilog

Data & Cloud: SQL, PostgreSQL, MongoDB, Firebase, Spark, Hadoop, Kafka, Redis, AWS, Google Cloud, Docker

Tools & Frameworks: React, Node.js, Express, Django, Flask, TensorFlow, PyTorch, Scikit-learn, Pandas, NumPy, Git

WORK EXPERIENCE

Amazon Web Services (AWS)

Seattle, Washington

Software Developer Engineering Intern

Jun 2024 - Sep 2024

- Integrated Perfetto into the Trainium (ML Accelerator) neuron profiler, enhancing performance and event rendering by modifying the profile output and plugin features, reducing delay by 10+ sec for 100,000+ users (Python, Golang, Java)
- Optimized ML models to efficiently process large datasets, reducing computation time and improving scalability

ScAI Lab at UCLA

Los Angeles, California

Machine Learning Researcher

Mar 2024 - Jun 2024

- Implemented, validated, and integrated an optimized machine learning algorithm for Bellman-Ford, achieving significant performance gains and increased accuracy by ~72% on large-scale datasets compared to existing AI models
- Co-authored a comprehensive research paper, highlighting potential impact of the work on real-world network analysis

Stellant Systems

Torrance, California

Software Engineering Intern

Jun 2023 - Sep 2023

- Developed software solutions using C# and Visual Basic to reprogram the continuity isolation station, used in effectively identifying and resolving current leakage issues 23% faster in all traveling wave tubes manufactured in the U.S.
- Automated air gauge system using PHP/MSSQL, facilitating data integration of tube diameters into a centralized database

Sensing and Robotics for Infrastructure Lab at UCLA

Los Angeles, California

Tightly-Coupled, Graph-Based DVL/IMU Fusion Project Lead

Apr 2023 - Sep 2023

- Designed and implemented a custom DVL factor by architecting a robust class structure derived from existing preintegration classes within GTSAM, enhancing the accuracy of sensor fusion algorithms
- Created unit tests using C++ to validate the factor's functionality and ensure reliable performance in real-world scenario

FitDrive

Toronto, Canada

Software Engineering Intern

Jun 2020 - Jul 2020

- Implemented UI/UX design and backend development using HTML and Swift, resulting in seamless integration of frontend and backend functionalities (timer, calendar, touch-free interface) and improved user engagement
- Facilitated and grew a customer base of over 100 personal trainers and clients, earning the company ~\$1,200 per month

STUDENT ORGANIZATION EXPERIENCE

Rocket Project at UCLA - Project Ares Software and Prometheus Avionics Lead

Sep 2022 - June 2024

- Utilized EagleCad to design and optimize rocket components, integrating live flight data for real-time monitoring/analysis
- Built and maintained code that powers ground systems microcontrollers, DAQ GUI, and avionics GUI (C, C++, Python)

PROJECTS (<https://github.com/brandonlo11>) (<https://brandonlo11.github.io/Portfolio-Website/>)

Custom AI Chatbot

Jul 2023

- Developed AI chatbot using LlamaIndex and GPTIndex, incorporating custom knowledge bases for personalized interactions and leveraging GPT-3's language model for human-like responses (Python)
- Handled over 1,000 user interactions with a 95% accuracy rate in delivering contextually relevant and personalized responses, enhancing overall user experience and satisfaction due to the chatbot's human-like conversational capabilities

BSwipe Website

Mar 2023

- Leveraged the MERN technical stack to develop and deploy a fully functional website, featuring dynamic data processing, efficient client-to-backend data uploading, and server-side data search capabilities (MongoDB, Express.js, React, Node.js)
- Enabled hundreds of students to buy and sell meal swipes through an efficient and accessible streamlined platform