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   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

WORK EXPERIENCE

Google   **Mountain View, CA**
Software Engineer (Noogler)   Jul 2025 - Present
- AVID (Display Ads) Infrastructure

Amazon Web Services (AWS)   **Seattle, Washington**
Software Developer Engineering Intern   Jun 2024 - Sep 2024
- Integrate Perfetto into the Trainium(ML Accelerator) neuron profiler, enhancing performance and rendering by modifying the profile output and plugin features, reducing delay by 10+ sec per UI change for 100,000+ users (Python, Java, Golang)
- Optimize 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
- Implement, validate, and integrate an optimized machine learning algorithm for the Bellman-Ford algorithm, 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

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

Domain Knowledge Chatbot   June 2025
- Engineered a knowledge-graph chatbot that ingested 180 UCLA CS course descriptions, auto-extracted 5.2 k subject-predicate-object triples at 94% precision (200-sample audit), and delivered sub-second semantic queries (Neo4j, FastAPI)
- Designed a RAG pipeline (LangChain, GPT-4o) with prompt-batching and streaming, cutting token costs 63 % and shrinking median response time from 3.4 s to 1.2 s while sustaining 1 k+ QPS in Locust load tests

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

SKILLS

Languages: Python, Java, JavaScript, TypeScript, C++, C, C#, Golang, Swift, HTML, CSS, Verilog
Data & Cloud: SQL, PostgreSQL, MongoDB, Firebase, Spark, Hadoop, Kafka, Redis, Neo4j, AWS, Google Cloud, Docker
Tools & Frameworks: React, Node.js, Express, Django, Flask, TensorFlow, PyTorch, Scikit-learn, Pandas, NumPy, Git