Nevin Liang

nliang868@ucla.edu | 408-868-8691 | github.com/nzwl702 | linkedin.com/in/nevinliang

EDUCATION

University of California, Los Angeles June 2023

Bachelors of Science in Computer Science and Engineering (GPA 4.0/4.0)

- **Relevant courses**: Applied Numerical Computing, Machine Learning, Algorithms and Complexity, Discrete Math, Statistical Reasoning, Computer Architecture, Operating Systems, Computer Organization, Software Construction, Data Structures and Object Oriented Programming in C++ and Python, Logic Design of Digital Systems, Probability and Statistics for Electrical Engineers, Systems and Signals, Feedback Control, Circuit Analysis and Creation, Digital Design Laboratory, Electrical and Electronic Circuits
- **Self study**: Harvard Statistics 110, Machine Learning by Stanford, Akuna Options 101

Societies and Affiliations: HKN Honor Society, Association for Computing Machinery, IEEE

EXPERIENCE

Large-scale Machine Learning Group (BigML Labs), *Los Angeles, California* *Apr 2021 - Present*

Undergraduate Researcher, advised by Prof. Mirzasoleiman

- Investigating the efficacy of a novel convex loss function for DNNs on real world datasets and big data

Tesla, Inc., *Palo Alto, California* *Jun 2021 - Aug 2021*

Embedded Systems Engineer Intern

- Created development tools to debug the Infotainment System during post-manufacturing. Made use of FreeRTOS, SocketCAN.
- Investigated and tested signal processing infrastructure for an internal company-wide end-to-end build system using Python.

Rush, *Los Angeles, California* *Sep 2020 - Jan 2021*

App Developer

- Full-stack developer for iOS campus life app; built authentication, firebase data storage, image storage, and user interface components.

PROJECTS AND SHORT PAPERS

Wireless Sensor Network Optimization *Mar 2021 - Jun 2021*

Applied Numerical Computing EE 133A

- Application of the Levenberg-Marquardt method to optimize locations of nodes in a wireless sensor network given tower locations and approximate distances; built an iterative fuzzy finding approach to pinpoint optimal placement

Car Convoys and Traffic Fluidity *Mar 2021 - Jun 2021*

Feedback Control Theory EE 141

- Feedback controllers for car convoys to maintain separation while driving through traffic. Written in Matlab and Simulink.
- Implemented solution for nonlinear systems by approximating with linear systems then using a systematic PID control approach.

Environmental Fluctuation Detection *Feb 2021 - Mar 2021*

Operating Systems CS 111

- Application for remotely detecting and transmitting environmental changes data to a centralized server. Uses Secure Socket Layer Encryption; written in C.

RSLK Infrared Car with PID Control *Sep 2020 - Dec 2020*

- Designed and built a miniature rover to follow single-lined paths using an infrared sensing array at super-high speeds. Coded in C.

HONORS

- USAMO Qualifier
- USAJMO Honorable Mention
- USAPhO Silver Medal (2x)
- USACO Platinum Division
- CodeForces Candidate Master Rank
- Sandia National Laboratories Space Blimp Hackathon 2nd Place
- UCLA Dean's List 2021

TECHNICAL SKILLS

- C, Python, C++, TensorFlow, Matlab, Octave, R, Julia, Git, Gnuplot, CVX, CVXPY, NumPy, pandas
- Verilog, FPGA, Simulink, Xilinx, UNIX Shell Script, x86-64, MIPS, RISC-V Assembly, FreeRTOS
- ARM Cortex-A8 Architecture, Beaglebone, Arduino, AutoCAD, RSLK