Xinle (Eric) Song

(310)-869-9560 | erics311@ucla.edu | linkedin.com/in/xinle-song | github.com/EricSongXinLe

Education

University of California, Los Angeles — Los Angeles, CA
Bachelor of Science in Computer Engineering — *Expected June 2027*

- GPA: 3.83
- Selected Coursework: Digital Logic Design, Computer Organization, Data Structures and Algorithms, Software Construction, Discrete Structures
- John Richard Leffler Scholarship

Technical Skills

Languages: C/C++, Verilog/SystemVerilog, Python, JavaScript, HTML/CSS
Developer Tools: Vivado, Quartus, Questa, LTSpice, Fusion 360, GCC, GDB, Git, Bash, Emacs

Experience

UCLA Nanosystems Computer Aided Design Lab — Oct. 2024 – Present
Undergraduate Research Assistant

- Assisted in setting up TritonPart and the chiplet-cost-model on lab servers to enable future chip design simulation.
- Planning to integrate the chiplet-cost-model with the HISIM model to simulate size, power, performance, and yield tradeoffs in chiplet systems.

UCLA Center for Heterogeneous Integration and Performance Scaling — Jan. 2024 – Oct. 2024
Undergraduate Research Assistant

- Adapted the software driver for a FlexTrate microLED display with a new driver chip and 11x11 dimensions.
- Developed a pixel control algorithm to display "UCLA" across 25 frames per letter.
- Created an automated testing algorithm that reduced testing time by 70%, streamlining pixel-by-pixel activation.

Projects

Digital Audio Visualizer | *System Verilog, RTL Design, FPGA Programming, Git* — Sep. 2024 – Present

- Learning RTL design, and digital logic to develop a project that displays audio frequency levels on a VGA display.
- Gaining hands-on experience with sequential and combinational logic, and industry-standard tools like Quartus.

Micromouse | *C, PCB/Schematic Design, Circuit Soldering, Git* — Sep. 2023 – June 2024

- Programmed a maze-solving robot with PID control, optimizing performance by tuning parameters.
- Implemented motor control using PWM and encoders, along with IR SensorFusion to improve maze navigation.
- Designed a 2-layer PCB layout using Fusion 360 and researched components via SnapEDA, formualting BOM.
- Collaborated with teammates to solder and assemble the PCB, ensuring successful integration with the robot.

Find Your Clubs | *HTML, CSS, React, Node.js, MongoDB, Git* — Apr. 2024 – June 2024

- Lead a team to create a Full-Stack app to help students find clubs at UCLA
- Co-developed the backend API for the Recommender System, Smart Search and User Authentication
- Designed and optimized image-fetching logic, reduced loading time by 20% to enhance user experience
- Co-review pull-requests and merge conflicts to accelerate concurrent development

Active Noise Control in Ventilation Ducts | *Matlab, Simulink, DSP* — Sep. 2020 – May 2022

- Applied the LMS Algorithm to create a Feed-Back Active Noise Control System in Ventilation Ducts
- Added a Error Signal Microphone to increase the performance of the ANC System by 106% at 250Hz
- Simulated the ANC System with LMS Algorithm in Simulink and Matlab
- Participated in multiple rounds of viva-voce and was selected to participate in the final round of ISEF 2022