Chengming Li 8775 Costa Verde Blvd, San Diego, CA 92122 | stevenlcm16@gmail.com | 650-304-9670
Summary **Portfolio**: https://sites.google.com/colorado.edu/chengming-li/home **| GitHub:** https://github.com/stevenli518

- **Fast Learner**
  Managed to use the internet and online references to study Python in less than 2 weeks.
- **Hardware Skills**
  FPGA design, Arduino, PCB design, Oscilloscope, Function/RF Generator, Digital Multimeter, Spectrum Analyzer, Network Analyzer, Surface Mount Soldering
- **Programming Languages**
  Python, C/C++, C#, Verilog/System Verilog, Assembly (RISC-V), MATLAB, Tcl, HTML&CSS, SQL
- **Software Skills**
  Altium Designer (AD), LTspice, Cadence, Quartus, ModelSim, Simplicity Studio, VSCode, Visual Studio, MS Office, GitHub, Confluence, Lattice, Slack

Relevant Coursework: Analog IC Design, VLSI Digit System Algorithms and Architecture, Modern Communication Networks, Embedded Software Algorithm, Computer Organization, RTOS, Microelectronics, Programming of Digital Systems

Planning to Take: Digital IC Design, CMOS Analog Integrated Circuits & Systems, VLSI Integrated Circuits & Systems Design, VLSI Verification(UVM), Intro to Synthesis Methodologies in VLSI CAD, GPU Programming

Work/Research Experience

Eridan Communications Sunnyvale, CA
RF Test Engineer Intern June 2023 - Aug 2023
- Built MATLAB and C#'s DLLs to Python conversion infrastructure on GitHub for 7+ instruments and PCB test development
- Developed and executed batch scripts to semi-auto the installation process (under 5 minutes) of VScode, Python, and Rclone
- Documented 4 confluence pages for Python IDEs choices, Repo Usage, Hands-off, and Temperature Chamber Test results

University of Colorado at Boulder (Dr. Taylor Barton's RF Power and Analog Lab) Boulder, CO
Research Assistant Aug 2022 - May 2023
- Implemented multi-digital filters using Vivado FPGA (Red Pitaya) to reduce the distortion in the Class-AB power amplifier
- Automated the test with RF Generator, Spectrum Analyzer, and Power Supply to collect the IMD3, Pout, and Current data
- Processed the IMD3 data using Python and characterized the optimal transfer function using the network analyzer

Project Experience

Scalable Electrosurgical Unit for Controlling and Powering the Ligasure Dissection Device Boulder, CO
Software Lead **(Sponsor: Medtronic)** Aug 2022 - May 2023
- Created ADC, PWM, SCI, and CLA modules in C on the TI TMS320F28004C board in response to firmware development
- Reduced the RMS values calculation from 25% to 1.7% errors by using the bitwise mask to optimize the instruction cycles

4 Layer Instrument Droid PCB Design Boulder, CO
Individual Nov 2022 - Dec2022
- Developed 4 Layer PCB used to measure the output impedance of any voltage source lower than 12 V in Altium Designer
- Assembled the PCB's components using the Surface Mount Technology and debugged the communication issue of I2C pins

Golden Arduino PCB Design Boulder, CO
Individual Oct 2022 - Oct 2022
- Developed the schematic and layout for the Atmega328p chip Arduino with ADC, SPI, and UART-USB features in AD
- Reduced switching and crosstalk noise by placing decoupling capacitors, continuous ground plane, and unshared return paths

Bluetooth communication using I2C and SPI Boulder, CO
Team leader Oct 2021 - Dec 2021
- Programed the SPI and I2C communication bus in C based on event-driven architecture using Thunderboard UG309
- Transmitted the on-board light sensor and 3-axis accelerometer values to the smartphone app via BLE module

Robotic Toy Car Boulder, CO
Team member Jan 2021 - May 2021
- Created a robotic toy car circuitry with motor control using H-bridge, and achieved speed and direction control using Arduino
- Designed and simulated the speed control feedback loop with amplifier and differentiator circuitry in the LTspice

Education

University of California San Diego San Diego, CA
Master of Science in Electrical and Computer Engineering June 2025
Cumulative GPA: NA/4.00

University of Colorado at Boulder Boulder, CO
Bachelor of Science in Electrical & Computer Engineering | Minor in Computer Science May 2023
Cumulative GPA: 3.81/4.00 | Honor: Dean's List (Spring 2019 – Spring 2023)
Teaching (TA) experience: Introduction to circuits and electronics