Leo Ge
(any pronouns)

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Objectives, Skills

Looking for an internship in *computer engineering* or *software development* with interests in *embedded systems*, *computer architecture*, and *back-end programming*

- **Programming**: Golang, C/C++, Verilog, Python, x86 / ARM Assembly, Java/JavaScript
- **Development Tools**: VSCode, gcc/g++, GDB, Valgrind, Makefile, Arduino, Microchip MPLab, Vivado, Quartus
- **Source Control / Other Software**: Git, Linux / Unix (utilities + development environment), gem5, Autodesk Eagle (PCB), LTspice, Numpy, GNU Octave
- **Language**: Native English, fluent spoken Chinese, proficient Spanish

Education

Cornell University   **4.225/4.3 GPA**
  B.S., Electrical and Computer Engineering   08/2023 - 05/2026 (expected)
University of Colorado at Boulder   **4.0/4.0 GPA, member of Tau Beta Pi**
  B.S., Electrical and Computer Engineering *(transferred to Cornell)*   08/2022 - 05/2023

Notable Coursework

Cornell: ECE 3140 *(Embedded Systems, Spring 2024)*; CS 3410 *(Computer System Organisation, Spring 2024)*; CS 2800 *(Discrete Structures, Spring 2024)*; ECE 3250 *(Signals and Systems)*; ECE 2100 *(Introduction to Circuits)*; ECE 2720 *(Data Science)*; ECE 2300 *(Digital Logic and Computer Organisation)*

CU: CSCI 2270 *(Data Structures)*; ECEN 2350 *(Digital Logic)*

Experience

Undergraduate Researcher, CU SPUR (hybrid)   05/2023 - 08/2023
- Created benchmarks in *C* to test for three Spectre-type CPU vulnerabilities on a host operating system and the gem5 simulator, enabling future research to verify transient execution mitigations / test for vulnerabilities.
- Gained *computer architecture* and *lower-level programming* experience. ([link](#))

Learning Assistant, CSCI 1300 (in-person)   01/2023 - 05/2023
- Worked for 10+ hours a week with a larger team to mentor nearly 300 students through an introductory *C++* course. Helped students fix bugs, improve their C++, and develop a passion for computer programming.
- Improved *technical communication* skills and understanding of the *C++* language.

IB Extended Essay   01/2021 - 01/2022
- Programmed and benchmarked the rope and gap buffer data structures using *Golang*. Evaluated adherence to time complexity models when manipulating 40000+ characters as part of structured research project.
- Gained experience with *data structures* and *automated program testing (benchmarks / unit tests)*. ([link](#))

Software Developer, CS@Mines Summer Internship (virtual)   06/2021 - 07/2021
- Developed / project managed FOSS interactive webapp to help people efficiently water their lawns, as part of 4-person team.
- Learned *JavaScript* and *React* for front-end development. ([link](#))

Teleoperated Programming Lead, FRC Robotics Team #2036   08/2018 - 05/2022
- Programmed and tuned a robot's core control systems *(PID, linear)* using *Kotlin* as teleoperated programming lead, enabling simultaneous operation and monitoring of 3 or more electromechanical systems, controlled by an *embedded system*. Contributed to top 10 finish in Colorado Regional, 2022-23 season.
- Developed *embedded engineering* and *software testing / integration* skills.([link](#))

Volunteer, Media Archaeology Lab (on location)   2016 - present
- Acting as museum docent giving tours, enhancing *communication skills* and improving public awareness of computing / media history.
- Currently repairing 1960s-era video game console, improving *analog electronics* and *reverse engineering* skills, and expanding the museum's functional catalog. ([link](#))

Volunteer TA, BuildARobot (in-person and virtual)   08/2017 - 05/2022
- *Taught* K-8 students how to build robots, program them with a block-based language, and apply STEM concepts (at least once per week, 8 to 9 months of the year).
- Helped develop student interests and core skills in STEM fields.

See [my portfolio](#) for personal / class projects.