

Eric Gosnell

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EDUCATION

BS in Computer Science | University of Colorado Boulder
Minor in Computer Engineering, Certificate in GIS and Computational Science

Expected in May 2026
 Current GPA: 3.72/4.0

COURSEWORK

Data Structures, Algorithms, Programming Languages, Software Development, Computer Systems, Operating Systems, Computer Organization, Databases, Theory of Computation, Graphics, Compiler Construction

AWARDS

Horace M. Hale Esteemed Scholar Award, Dean's List, Coal Creek Canyon Community Scholarship, Seal of Bilingualism in Spanish

SKILLS

Tools: Git/GitHub, GDB, Valgrind, CMake, Linux, CLion/PyCharm/IDEA, Vivado, VS Code, Jupyter Notebook
Languages: C/C++, Python, SystemVerilog, RISC-V Assembly, SQL, HTML, CSS, JavaScript, Java, Scala, Rust, L^AT_EX
Libraries & Frameworks: OpenGL, OpenMP, NumPy, Pandas, Django, NodeJS, Postgres, MongoDB

EXPERIENCE

Snow Hydrology Research Intern | *Institute of Arctic and Alpine Research* January 2025 – Present
 Collect snow stratigraphy data from multiple high elevation remote sites. This data consists of snow density, snow water equivalent, grain size/type, depth, and temperature.
 Data is published through the Niwot Ridge LTER web portal.
 Present poster on my work at the Hydrologic Sciences Research Symposium.

Computer Science Department Assistant | *University of Colorado Boulder* August 2024 – Present
 Manage the Computer Science Education Lab, which includes scheduling room bookings and providing resources to students.
 Assist the CS Front Office by answering phone calls, sorting mail, loaning out resources, and more.

Forestry and Landscaping | *Coal Creek Canyon, CO* June 2020 – August 2024
 Started a yard work service within the local mountain community, interfacing with a large number of clients, and managing my teams schedule and tasks.
 Primarily built rock walls, mitigated wildfire risk, and controlled erosion.
 Additionally provided volunteer services to community members in need.

Back-End Developer | *Blueprint Boulder* August 2022 – June 2023
 Developed a web portal for the local non-profit Lafayette Empowerment Center.
 Created a database system for managing their students, programs, and donations.
 Experience with Python, Django and Figma.

PROJECTS

Personal Website | *HTML, CSS, JS* Present

- Creating my own personal website from scratch using HTML, CSS, and Javascript.
- Covers my interests, hobbies, and projects more in-depth .
- Hosted at <https://ericgosnell.github.io/>

OpenGL Mountain Scene | *C, OpenGL, ArcGIS Pro, GDAL* September 2024

- Created a 3D mountain scene with changing seasons from scratch in OpenGL using a USGS digital elevation model that I processed and ran calculations against to determine biome and color.
- Heavily optimized by directly accessing GPU memory, along with other optimization algorithms that I implemented like frustum culling and proximity-based rendering.
- More details can be found here: <https://github.com/EricGosnell/CSCI4229-Mountain-Scene>

DEM Accuracy Improvement Proposal | *Remote Sensing, Data Processing, Machine Learning* March 2024

- Proposed a novel method using lidar drones and machine learning algorithms to increase the resolution and accuracy of digital elevation models (DEMs) provided by USGS 3DEP.
- Wrote a 10 page paper detailing the process and limitations of this method within various regions of Colorado