

GURTEJ SINGH

Moscow, ID

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Education

B.S. Computer Science

January 2021 – May 2025

University of Idaho

Moscow, ID

Key Technical Skills, Core Strengths, Relevant Coursework

- Python / Flask
- Git / Linux / Docker
- JavaScript / React
- C / C++
- C# / Unity
- Unreal Engine
- SQL / Neo4j
- Pandas / NumPy
- ESP32 / FreeRTOS
- OpenCV
- Computer Architecture
- Embedded Systems

Experience

Schweitzer Engineering Laboratories

May 2024 – December 2024

Software Engineer Intern | Python, JavaScript, Flask, HTMX

Pullman, WA

- Developed a web app for the manufacturing pipeline that saves time and allows collaboration between engineers.
- Enhanced internal tools by fixing bugs and adding new features for engineering teams to aid product development.
- Presented work progress in weekly meetings with internal clients and supervisor.
- Tested satellite-synchronized network clocks (SEL-2488) for electromagnetic interference.

Alward Institute for Collaborative Science

December 2023 – April 2024

Data Analyst | SQL, Python, Neo4j, Cypher

Moscow, ID

- Analyzed natural resource supply chains and the economic impact of industries in this sector.
- Transformed large-scale SQL datasets into NoSQL graph databases using Neo4j.
- Modeled complex data into a native graph structure and created documentation for future reference.

University of Idaho

August 2021 – August 2022

Server & Dishwasher | Customer Service, Time Management, Initiative

Moscow, ID

- Maintained high standards of customer service during high-volume, fast-paced operations.
- Took initiative to find extra tasks when scheduled duties were completed.
- Built a loyal clientele through friendly interactions and consistent appreciations.

Projects

AteChip | JavaScript, Computer Architecture, Console Emulator

November 2023

- Designed a retro console emulator that allows running legacy software in a modern web browser.
- Implemented debugging capabilities for CHIP-8 games like Tetris, Pong, Breakout, Space Invaders, etc.
- Built the user interface elements like the screen and the debugger in HTML/CSS.

PicoMatrix | C, Ncurses, Terminal, Screensaver

June 2023

- Recreated the digital code rain effect from the cyberpunk movie franchise, “The Matrix”.
- Utilized C and the Ncurses library to display the effect on a terminal.
- Documented the project details and process on GitHub.

WarpSpeed | Lua, Love2D, 3D Perspective Projection

March 2023

- Simulated the effect of travelling through space using Lua and the Love2D game engine.
- Achieved the illusion of a 3D space on a 2D plane using perspective projection.
- Implemented adjustable travel speed using mouse movement inputs.

Spotiboi | Python, Spotify, Linux, D-Bus

February 2022

- Developed advertisement detection for the Spotify desktop app using Python and Linux D-Bus IPC service.
- Monitor any status change in Spotify to mute the app via PulseAudio API if an advertisement is playing.
- Understood inter-process communication mechanism in a desktop Linux environment.

Extracurricular

Association for Computing Machinery

January 2023 – May 2023

Member

University of Idaho

- Represented University of Idaho in a competitive problem-solving hackathon against Washington State University.
- Attended and participated in seminars and learning sessions for new and interesting technologies like the Rust programming language, Firebase cloud database, etc.

Awards and Scholarships

- University of Idaho’s Dean’s List (Fall 2023)
- Invitation to Idaho Scholarship (2021 – 2025)