Richard Grover

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EXPERIENCE

dCubed - Camera Rubik's Cube Solver   **February 2024 - Present**
Project
- Used PyTorch & OpenCV to reconstruct all Rubik's Cube faces via only two photos, reducing user input time from several minutes to ~5 seconds
- Trained a custom detector on an auto-labeled dataset of almost 200,000 images, improving accuracy by over 3x
- Leveraged React, TailwindCSS, and Three.js to build an intuitive 3D web interface

Simulo - Game Engine Project   **March 2023 – Present**
Project
- Achieved native performance on all 3 computer platforms with custom Vulkan and Metal renderer
- Created a programming language from scratch to enable easy client-side scripting
- Handled over 18,000 TCP requests per second via an extremely efficient io_uring event loop

Randomcraft   **May 2022 - August 2022**
Java Developer Intern   *Remote*
- Developed game code to run on the network's custom auto-scaling infrastructure
- Used Java to develop intelligent 3D search algorithms to reduce level configuration time
- Built on a codebase spanning 10+ repositories

Soulblade - Game Server Startup (acquired)   **October 2021 – April 2022**
Founder and Lead Developer   *Remote*
- Led a motivated team to advertise and interact with the community, gaining 100+ members pre-acquisition
- Aggressively reduced costs by building customer support, moderation, and other features in-house, saving $1,000+ in cost, and gaining profitability
- Overcame an ecosystem of brittle, fragmented software by writing 15,000+ lines of server-side game logic in Java, allowing increased efficiency and faster iteration

ACCOMPLISHMENTS

- Speaker at the Utah React conference and Utah Python Meetup
- First Place for the Project Showcase at my college
- Vice President of Robotics Club
- Mentored 20+ freshmen students to help their transition into college living

SKILLS

Languages: TypeScript, Python, Go, Rust, Java, Kotlin, C#, C++, C, Assembly
Web: React, Azure, Google Cloud, AWS, Next.js, TailwindCSS
Software: Docker, Postgres, SQL Server, Linux, React Native, PyTorch, Vulkan, OpenGL, Git

EDUCATION

Neumont College of Computer Science   **2023 - 2026**
Bachelor's of Science, Computer Science, President's List, 4.0 GPA   Salt Lake City, UT