Benjamin Hinchliff

ر Cal Poly CS Student & Multitalented Programmer

■ benjamin.hinchliff@gmail.com • benjaminhinchliff.com • BenjaminHinchliff in LinkedIn

EXPERIENCE

NASA Jet Propulsion Laboratory Intern (Part Time)

Sept 2023 -

- · Brought on part time after internship
- Working to continue Development on Mars Rover Simulation Software

NASA Jet Propulsion Laboratory Intern (Full Time)

June - Sept 2023

- Worked to Develop and Maintain Mars Rover Simulation Software (RSVP Suite)
- Ported simulation software from RedHat Enterprise Linux (RHEL) 7 to RHEL 8
- · Fixed major issues including crashing bugs, logic bugs, data format incompatibilities, and more
- Developed new terrain searching features

Versational | Full-stack Software Developer

June - Sept. 2021

- · Created dashboard for the consumer analytics platform Versational
- Built platform integration with AssemblyAI transcription API, front-end and back-end
- · Connected speakers to user accounts
- · Assisted development of Deep Learning "Gems" identification models based on BERT
- · Integrated the machine learning "Gems" identification models into the platform and dashboard
- Fixed bugs throughout the platform, such as credential leakage to the frontend

VenAdvisory | Software Developer

June - Sept. 2020

- · Built WordPress (PHP) front-end and back-end to create new transcripts for customer analysis
- Identified and fixed security issues including Cross Site Scripting and SQL Injection
- · Gained professional experience working with an offshore development team

PROJECTS EXAMPLES

Full (uncurated) list at benjaminhinchliff.com/projects

WebGPU Accelerated Raytracer | C++20, CMake, Dawn

- A GPU accelerated Raytracer based on Google's Dawn WebGPU implementation
- Supports creation of scenes program side
- multiple primitives, material, supported using dynamically generated WGSL shaders

Portfolio Website (Source) | Svelte(kit), SSR, HTML, SCSS, TS, JS, Vite

- · Uses SSR and caching techniques to (optionally) work without JS
- · Compact, using a production framework and a real build system

Dungeonator (Source) | C99, CMake, C++17, Catch2 (for tests), doxygen (for docs)

- Small and lightweight library for procedural dungeon generation
- Code written entirely in standards-compliant C99
- · Fully documented: benjaminhinchliff.github.io/dungeonator

SKILLS

Programming

- Computer Science Fundamentals e.g. Data Structures and Algorithms
- C/C++ (7+ years) STL, OOP, API development, Boost C++, Qt, GTK, FLTK, Template Metaprogramming
- Web Development (6+ years) React, Vue, Svelte, ¡Query, vanilla JS
- · Rust (4+ years) Ownership, Lifetimes, Effecient Multithreading
- Other (3+ years) SQL, Python, Rust, Assembly (x86 & x86_64)
- Other (1+ years) Zig, Assembly (arm64)

Tools/Others

- Scripting(Bash, Python), git, CI/CD (Github Actions & Jenkins), Linux/Unix (X11 & Wayland), Windows
- Lateral Studio Code, Intellia IDEA, Visual Studio, Microsoft Office / LibreOffice

FDUCATION

California Polytechnic State University, San Luis Obispo (Cal Poly) B.S. Computer Science GPA 3.85 (President's Honors List)

2025