

Brett Sumser

541-221-1759 | bsumser@gmail.com | bsumser.dev | github.com/bsumser

EDUCATION

University of Oregon

Eugene, OR

Bachelor of Science in Computer Science, Minor in Mathematics

Sep. 2020 – June 2024

Relevant Coursework *Operating Systems, Data Structures, Computer Graphics, Principles of Programming*

Languages, Automata Theory, Intro to Compilers

EXPERIENCE

Code Sensei

September 2023 – Present

Code Ninjas

Eugene, OR

- Instructed children aged 7-12 in programming fundamentals using Microsoft MakeCode and JavaScript.
- Developed an adaptive input device using C++, 3D printing, and electronics knowledge, enabling a student with limited dexterity to fully participate in coding activities.
- Adapted teaching methods to individual student learning styles and paces.

Server

May 2020 – Present

Ambrosia Restaurant

Eugene, OR

- Honed client communication, conflict resolution, and time management skills under pressure in a high-volume, customer-facing fine dining environment.
- Collaborated effectively with kitchen staff and management to ensure seamless service and customer satisfaction.

PROJECTS

Quack Compiler | *C, Python, Make*

Apr 2024 – Jun 2024

- Developed a compiler for an object-oriented, single-inheritance language from design specification to MIPS assembly generation.
- Implemented Backus-Naur grammar parsing, type checking, and semantic analysis based on language rules.
- Led implementation of the parsing and type-checking module using Python.
- Collaborated with and assisted fellow students in debugging and implementing compiler components during weekly sprints.

Portfolio Website | *React, Node.js, PostgreSQL, Docker, Nginx, Git*

June 2020 – Present

- Developed and deployed a full-stack web application serving a personal portfolio via a Node.js REST API with a React frontend.
- Implemented CI/CD pipeline using GitHub Actions for automated testing and deployment to DigitalOcean App Platform.
- Configured Docker containers for application services and Nginx as a reverse proxy.
- Integrated Magic the Gathering card data analytics using Node.js API endpoints and PostgreSQL database.

Feed-Forward Neural Network | *C++, Make*

Feb 2024 – Mar 2024

- Solo developed a feed-forward, back-propagating neural network from scratch in C++.
- Utilized object-oriented design principles for neuron, layer, network, and training data classes.
- Achieved 98% accuracy in classifying wine varietals from a dataset of chemical attributes.

Arrow Dynamic (Game) | *C#, Unity, Git*

April 2023 – June 2023

- Collaborated in a team using Git for version control to develop a puzzle-platformer game in Unity.
- Implemented core gameplay mechanics related to player controls, physics interactions using C# scripts and Unity APIs.
- Contributed to sound integration and level design within the Unity environment.

TECHNICAL SKILLS

Languages: C/C++, Python, JavaScript, C, SQL (Postgres/MySQL), HTML/CSS

Frameworks: React, Node.js, Unity

Developer Tools: Git, Docker, AWS (EC2), Vim, VS Code, Visual Studio, Make, Nginx

Libraries: pandas, NumPy

Operating Systems: Linux (Ubuntu, Arch), Windows, macOS