

Sam Weldon

📍 New York, New York ✉ sam@sam-weldon.com ☎ (860) 931-6662 in -sam-weldon 📱 samweldon9393

Education

Columbia University

Jan 2024 – Dec 2026

Bachelor of Arts in Information Science GPA: 4.1 / 4.3

- **Coursework:** Artificial Intelligence, Databases, Data Structures, C++ for C Programmers, Advanced Programming, Advanced Systems Programming, Natural Language Processing

Housatonic Community College

Jan 2020 – May 2023

Associate of Arts in History GPA: 4.0 / 4.0

- **Honors:** Summa Cum Laude, Phi Theta Kappa Honor Society

Skills

Languages: C++, C, Python, SQL, JavaScript, TypeScript, Java

Technologies: Pandas, Linux, Bash, React, HTML, CSS

Experience

Advanced Programming Teaching Assistant

New York, NY

Columbia University

Sept 2025 – Present

- Hold weekly office hours and provide one-on-one guidance to students on debugging complex systems, compiling, and understanding program behavior at the system level.
- Reinforce over 300 students' understanding of version control using Git, Makefiles, and UNIX shell tools as part of a professional software development workflow.
- Facilitate learning of C programming language and web-based software architecture concepts, including multi-tier architectures and HTTP protocol differences.

Summer Fellow

Ossining, NY

Sing Sing Prison Museum

June 2025 – Aug 2025

- Developed a production-ready React and TypeScript application to be embedded in the museum's visitor center as an interactive exhibit, enabling users to explore prison architecture through a responsive UI.
- Designed modular front-end components and implemented state management for smooth navigation and scalability within the exhibit environment.
- Built custom data visualization animations in Python (Manim) to illustrate trends in incarceration, integrating statistical data with compelling visual narratives for public presentations.

Projects

Make

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- Implemented the command-line Make program, including serializing and recording cache files to improve efficiency.
- Tools Used: C++, Valgrind, GDB, Git

Data Collection Sentiment Analysis Project

[Reddit-Hates-Coaches](#)

- Developed a data pipeline to scrape, store, and analyze online comments about NBA coaches using HuggingFace's pre-trained transformers model API for sentiment analysis.
- Tools Used: Python, SQL, Hugging Face Transformers, Pandas, Matplotlib, Git, GitHub

NYC Restaurant Database Web App

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- Collaborating with a teammate to design and build a full-stack web application with a PostgreSQL backend and Python-based server hosted on a Google Cloud Virtual Machine to manage and query a database of NYC restaurants.
- Tools Used: Python, JavaScript, PostgreSQL, Flask, Google Cloud, Google Maps API, Git, GitHub

Personal Website

[SamWeldon9393](#)

- Designed and developed my personal portfolio website from scratch, including embedded, interactive data visualization utilizing AI coding assistants and open-source libraries
- Tools Used: JavaScript, HTML, TailwindCSS, d3.js, Claude, ChatGPT, Git, GitHub

Web Server

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- Created a custom web server from scratch in C using HTTP 1.0 protocol, including both frontend and backend servers to handle user requests for database queries.
- Tools Used: C, Valgrind, GDB, Git