

William Welden

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Portfolio | LinkedIn | GitHub

Education

Trinity University

B.S. in Computer Science

San Antonio, TX

Dec 2025

- Graduated Dec 2025.
- Member, Cross Country and Track teams (2021–2024).

Technologies

Proficient: Go, C#, Haskell, JavaScript, TypeScript, Java, Scala, C++, Python

Tools/Platforms: Unity, GitHub, GitHub Actions, Bash, Google Cloud, Convex, Vercel, Clerk

Projects

British (Programming Language)

Haskell

github.com/wwelden/British

- Designed and implemented an esoteric language with British-inspired keywords, including a lexer, parser, and evaluator.
- Built a REPL supporting expressions, control structures, and data manipulation; practiced AST transformations and functional programming patterns.
- Tools: Haskell, Happy, Alex.

DataTrader

Go, HTMX, SQLite

github.com/wwelden/DataTrader

- Web app for managing trades and analyzing trading habits; supports stocks and options.
- Designed to avoid JavaScript by using server-rendered HTML with HTMX for responsiveness.
- Features: stock/option position tracking, user registration/login, CSV trade import/processing, and update/delete/close workflows.
- Tools: Go, HTMX, Templ, SQLite.

Chefs Vs. Aliens

C#, Unity

github.com/JorgeFLarach/CVA

- Built a parody tower-defense game in Unity inspired by Plants vs. Zombies.
- Collaborated via Git; resolved merge conflicts and maintained .gitignore/project structure.

Blue Dog Shopping

JavaScript, EJS, MySQL

github.com/jbrigham01/PetSmartest

- Implemented a pet-store website simulation with authenticated vendor tools to add/remove/update products and a cart/checkout flow.
- Developed server + frontend features and managed a GitHub-based workflow.

Keystroke

TypeScript

github.com/wwelden/Keystroke

- Implemented a Markdown parser that converts Markdown to HTML.
- Focused on interpreter-style design and clean AST-based transformations.

DarkWeb Scraper (Dark-Web-Crawler)

Python, Tor

github.com/wwelden/Dark-Web-Crawler

- Built a security-course project to search for leaked user data on dark-web sites using a safer, automated workflow.

- Tools: Python, Tor, VPN, Kali Linux VM, Bash.

TIPC Compiler

C++

github.com/wwelden/Compilers

- Compiled low-level ILOC into optimized assembly via register allocation and dependency-based instruction scheduling.

Go Interpreter (Monkey language)

Go

github.com/wwelden/Go-Interpreter

- Built an interpreter for a C++-like toy language (Monkey) following Thorsten Ball's *Writing an Interpreter in Go*; planning compiler extensions and additional language features.

Space Game

Scala

github.com/wwelden/SpaceGame

- Created a Galaga-style clone with additional features, focusing on data structures and game-loop architecture without a game engine.

Experience

Pro Squares Janitorial Services

Freelance

Database Manager (TeamDesk)

Jan 2026 – Present

- Manage and maintain the company's TeamDesk database to support day-to-day operations and reporting.
- Clean up records, standardize fields, and resolve data quality issues to improve reliability and usability.
- Assist with ongoing updates to tables/views to match evolving business workflows.

Starbucks

San Antonio, TX

Barista (Part-time)

Jun 2025 – Aug 2025

- Prepared espresso beverages, handled cash/card transactions, and maintained a clean, organized work area during peak hours.
- Provided fast, friendly customer service while balancing multiple orders and resolving issues professionally.

Blue Button Project Contributor

Fall 2024

github.com/TU-SSP-blue-button/blue-button

- Contributed to an open-source XML–JSON conversion library by updating dependencies and fixing bugs.
- Implemented GitHub Actions workflows for CI/CD.

Marlow's Tavern

Atlanta, GA

Server Assistant (Part-time)

Jun 2022 – Jul 2022

- Supported front-of-house operations by bussing tables, resetting sections quickly, and assisting servers and bartenders.
- Maintained dining-room cleanliness and helped with dishwashing to keep service running smoothly.

Relevant Coursework

- Discrete Structures
- Calculus I
- Modern Mathematics
- Engineering Analysis & Design
- Principles of Comp. Sci. I
- Principles of Comp. Sci. II
- Data Abstraction
- Algorithms
- Operating Systems
- Database Systems
- Functional Languages
- Programming Languages
- Theoretical Computer Science
- Compiler Construction
- Web Application Design
- Software Engineering
- Intro to Game Development
- Comp. & Network Security

- Senior Software Project I

Certifications

- Expert Excel Certified