Adam McDaniel

Software Developer and Senior at the University of Tennessee

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EXPERIENCE

University of Tennessee, Knoxville — *Undergraduate Teaching Assistant*

AUGUST 2021 - PRESENT

Teaching Junior level Computer Science lab classes. Advising students on how to complete assignments and troubleshoot their programs during lab and office hours.

Oak Ridge National Laboratory, Oak Ridge — *Software Developer Intern*

MAY 2019 - AUGUST 2019

Developed Rusty-CI, a general purpose GitHub and GitLab integration tool. Contributed to the ASGarD (Adaptive Sparse Grid Discretization) project, a partial differential equation solver for exascale architectures.

University of Tennessee, Knoxville — *Software Vendor*

SEPTEMBER 2018 - JUNE 2019

Helped develop the Simulated Electronic Fetal Monitoring app in JavaScript, and rewrote the application in Dart to run natively on mobile and desktop.

PROJECTS

Dune — Portable, custom shell

github.com/adam-mcdaniel/dune

Implemented a shell with features such including: syntax-highlighting, tables, lists, standard library functions, lambdas, and macros. Dune runs on all major operating systems. Implemented a weather API in the shell script.

Harbor — High level language compiler to a 4 bit instruction set virtual machine

github.com/adam-mcdaniel/harbor

Implemented a compiler with procedures, nested scopes, compound types, type checking, tuples, arrays, pointers, and manual memory management using a 14 instruction virtual machine. Each instruction takes zero arguments.

SKILLS AND ACHIEVEMENTS

Proficient in Rust, Python, C++, Bash, PowerShell, Git version control, Microsoft Word, PowerPoint, and Excel.

Daily Linux user.

Shell scripting experience.

Professionally experienced with both GitHub and GitLab.

Created multiple 600+ star repositories on GitHub.

3rd Place at VolHacks 2021.

Proficient in Spanish.

High school Valedictorian.

EDUCATION

University of Tennessee, Knoxville — *Bachelor of Computer Science*

AUGUST 2020 - DECEMBER 2022

Graduating in December of 2022. Currently attending and maintaining a 3.98 GPA.

Pellissippi State Community College, Knoxville — *Computer Science Major*

JANUARY 2019 - MAY 2020

Took 1.5 years of dual enrollment towards my Bachelor's degree at Pellissippi during high school.

Chess-Engine — Zero dependency chess engine for the web, the desktop, and embedded devices

github.com/adam-mcdaniel/chess-engine

Created a chess engine, which runs in the browser, without using the standard library. Also implemented a desktop GUI interface. The engine supports multiple chess variants, and can handle custom board states.

Oak — Compiled programming language

github.com/adam-mcdaniel/oakc

Wrote a compiler from scratch for a C like language with structures, copy constructors, destructors, conditional compilation, and type checking. Created the virtual machine's custom instruction set.

Game of Life — Conway's Game of Life simulator supporting infinitely large worlds

github.com/adam-mcdaniel/game-of-life

Implemented a Game of Life simulator on an infinite plane. Created a GUI for the simulator.