Adam McDaniel

Graduate student and software developer at the University of Tennessee

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EXPERIENCE

• University of Tennessee, Knoxville — *Graduate Research*

JUNE 2023 - PRESENT

Researching the compressibility of memory allocations in programs. Created a heap allocator which profiles applications by tracking and compressing RAM data to find routines with inefficient memory usage.

• University of Tennessee, Knoxville — *Undergraduate and Graduate Teaching Assistant*

AUGUST 2021 - PRESENT

Teaching computer science lab classes. Advising students on how to complete assignments and troubleshoot their programs during lab and office hours. Grading student assignment submissions.

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

MAY 2019 - AUGUST 2019

Developed Rusty-CI, a general purpose GitHub and GitLab continuous 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.

NOTABLE CREATIONS

• Dune — Portable Working Environment For Developers

github.com/adam-mcdaniel/dune

Implemented a shell with features such including: syntax-highlighting, automatically formatted tables, lists, standard library functions, lambdas, and macros. Dune runs on all major operating systems, and on Android. Result: I use this tool daily to navigate my operating system.

• Sage — Compiled Language With Web Playground

adam-mcdaniel.net/sage

Wrote a compiler from scratch for a typesafe C-like language. Created a web-demo "code playground" with a compiler and interpreter built into the browser. Created a blog post with the playground embedded. Result: I successfully created a language for my web and desktop applications.

SKILLS AND ACHIEVEMENTS

Proficient in Rust, Python, C, C++, Bash, PowerShell, Git version control.

Daily Linux user.

Shell scripting experience.

Professionally experienced with both GitHub and GitLab.

Created multiple 600+ star repositories on GitHub.

Proficient in Spanish, spoken since 2021.

High school Valedictorian with 4.857 GPA.

EDUCATION

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

AUGUST 2020 - DECEMBER 2022

Graduated in December of 2022 with a 3.95 GPA (*Summa Cum Laude*).

• 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.