Devin Arena

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EDUCATION

Florida Gulf Coast University   **August 2019–Present**
Bachelors of Science in Software Engineering   Graduation: May 2023
Minor in Mathematics   Fort Myers, Florida

- President's List - 6-time recipient   Overall GPA: 4.0/4.0

WORK EXPERIENCE

SRC, Inc.   **January 2022–May 2022**
Embedded Software Engineer Intern   Syracuse, New York

- Upgraded the root filesystem on microtranceivers to transition from Python 2 to Python 3
- Setup a docker container to build the root filesystem through Bamboo
- Upgraded the configuration of the root filesystem management software to the latest version of Buildroot
- Created a makefile scraper to compile dependency and version information for Buildroot configurations
- Tested and documented the new Linux root filesystem and software package on existing microtranceivers

Florida Gulf Coast University   **December 2020–Present**
Research Assistant - Physics (Dark Matter Phenomenology)   Fort Myers, Florida

- Automated running MadGraph and MadAnalysis simulation software on Ubuntu using Python
- Automated collecting and compiling of data from generated output files using Python
- Analyzed output data for statistical significance in relation to publicly available detector databases

TECHNOLOGIES AND LANGUAGES

- Languages: C++, C, Rust, Java, C#, Python, Javascript/TypeScript, HTML, CSS
- Technologies: Git, SQL, SQLite, PostgreSQL, MongoDB, NodeJS, ReactJS, NextJS, REST APIs, Embedded, Linux, Windows
- Coursework: Data Structures & Algorithms, Data Engineering, Operating Systems, Software Security, Networking

PROJECTS

Palladium | C, Make   **June 2022–Present**

- Developed a scanner, parser, compiler, and virtual machine for an interpreted language in C
- Implemented a C-based grammar for writing simple interpreted applications

LinearAlgebraAST | Rust   **November 2022**

- Built a recursive descent parser and AST walker for parsing linear algebra expressions (REF, inverse)

TGraph | C++, Make   **August 2022–September 2022**

- Built a terminal-based equation graphing application in C++
- Implemented a Pratt parser for compiling complex equations
- Developed analytical tools including zoom and file output

RouxSolver | Node.js, Javascript, HTML, CSS, Three.js   **October 2021/June 2022**

- Created a speedcubing AI to track cube state, utilize algorithms, and compute near-optimal solutions
- Utilized Three.js to build an interactive speed cube in 3D space
- Implemented user-friendly controls and UI

ProductLog | Flutter, Dart, SQLite   **June 2021–August 2021**

- Created a cross-platform mobile application using the flutter SDK to track purchases in a database by their barcodes

Minesweeper AI | Javascript, HTML, CSS   **December 2019/September 2021**

- Built an AI that utilizes a probability map for solving Minesweeper puzzles in vanilla JavaScript