

Devin Arena

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EDUCATION

Florida Gulf Coast University

Bachelor of Science in Software Engineering

August 2019–May 2023

Fort Myers, Florida

- President's List

GPA: 4.0

WORK EXPERIENCE

SRC, Inc.

Embedded Software Engineer Intern

January 2022–May 2022

Syracuse, New York

- Upgraded the root filesystem on microcontrollers 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 microcontrollers

Florida Gulf Coast University

Research Assistant - Physics (Dark Matter Phenomenology)

December 2020–Present

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
- Presented 3 posters on the collision detection of dark matter

TECHNOLOGIES AND LANGUAGES

- Languages: C++, C, Rust, Python, Java, Javascript/TypeScript, HTML, CSS, C#
- 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

Positron | C, Make

December 2022–Present

- Developed a scanner, parser, compiler, and virtual machine for a dynamically-typed interpreted language in C

YDKBot | Javascript, Node.js, Discord.js

May 2023

- Created a Discord bot to query the YGOProDeck API and display card information in a formatted embed
- Implemented local caching to reduce repeated calls to the remote API and increase bot speed

TGraph | C++, Make

August 2022–September 2022

- Built a terminal-based equation graphing application in C++
- Implemented a Pratt parser for parsing 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 a user-friendly interface and controls

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