Veera Sivarajan

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Education

University of Massachusetts Amherst Amherst, MA

B.S. Computer Science *Sep. 2019 - Present*

- Relevant Courses: Compilers (CS 410), Functional Programming (CS 220), Introduction to Algorithms (CS 311), Statistics I (STATS 515), Artificial Intelligence (CS 383), Operating Systems (CS 377)
- Activities: UMass Table Tennis Club, UMass Running Club

Experience

Recurse Center **May 2022 – Aug. 2022**

Recurser *Brooklyn, NYC*

- Part of a elite programming community that strives to improve programming skills by building software products.
- Collaborated with other members and contributed to SerenityOS, a popular open source project.
- Gave multiple presentations, hosted meetings and pair programmed to discuss ideas for my project.

Center for Youth Engagement **May 2021 – Present**

IOS Developer *Amherst, MA*

- Created a Core Data model for the app to allow an easier way to visualize cache structure and migration capabilities.
- Implemented a feature to quickly clear cache and reopen app to provide the user with a fail-safe way to recover from caching issues.
- Added a UI feature to display all projects of a client as an accolade by accessing the data from client module and colorizing every element.
- Wrote documentation for implementing and migrating Core Data models to explain the process to other developers in the company.

Projects

bessy | Stack based bytecode interpreter written in Rust **May 2022 - Aug. 2022**

- Implemented a compiler and a virtual machine to interpret source code efficiently.
- Added a web-interface by compiling it to Wasm and used vanilla javascript to implement the frontend.
- Collaborated with Recursers to improve the time and space complexity.
- Published the project in popular forums and received positive feedback.

shell | Bash like shell written in C **Nov. 2020 - Mar. 2021**

- Used the fork-exec paradigm to spawn new processes and run programs.
- Implemented a single character lookahead scanner to quickly scan the input command.
- Learnt how to communicate with the kernel of the OS using system calls.
- Fixed all memory leaks using gdb and valgrind to analyze the program's memory and call stack.

lisp-interpreter | Interpreter for Scheme dialect of Lisp written in Python **Jul. 2020**

- Added more built-in operators to make the implemented language comparable to modern scripting languages.
- Collaborated with Lisp developers to implement primitive procedures into the language.
- Used Python's inbuilt functions to parse and scan the source code.
- Learnt how LISP syntax makes it easy to parse and extend the syntax of the language.

Skills & Interests

Languages: Rust, C, Javascript(React), C++, Python, Java, Scheme, HTML, CSS
Technologies: AWS Lambda, React, CI/CD, Docker, TCP/IP, LLVM, Arduino, Raspberry Pi, Front-end, WASM, Emacs, Git, Bash, Kubernetes
Interests: Long distance running, Table Tennis, Technical writing

Volunteering

PLDI **May. 2022**

Student Volunteer

- Moderated the chat for main track and ML workshop.
- Interacted with volunteers from universities around the world and discussed about various research areas.
- Participated in workshops and learnt about new advancements in Functional Programming.