Vipul Cariappa

Student

I love Computer Science and Mathematics. My interests are programming language design, formal logic, and automata theory. My interests keep changing as I am still exploring the vastness of computer science. Computational mathematics is something that has caught my eye recently. I am very much fond of open-source technologies and love to contribute. I am trying to learn, explore, and spread my findings to others.

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EDUCATION

B. Tech in Computer Science and Engineering

Ramaiah University of Applied Sciences

11/2021 - Present *Bangalore, Karnataka, India*

WORK EXPERIENCE

Internship

Google Summer of Code (GSoC) with GNU Octave

05/2023 - 09/2023 *Remote*

GNU Octave is a programming language for scientific computing with syntax largely compatible with MATLAB.

Achievements/Tasks

- My work focused on improving the state of the octave-pythonic package of Octave. Octave-Pythonic provides support to use/call Python functions, modules, and classes from within Octave REPL. Octave-Pythonic aims to be MATLAB compatible. My goal for the project was to fix bugs, add in many of the missing features, support the latest version of Python, and fix issues related to using Octave-Pythonic on Windows.
- Link: https://summerofcode.withgoogle.com/programs/2023/projects/aeEAbtyR

Open Source Contributions

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Contributions

- Implemented visualizer for Push Down Automata for automata. (My Work)

SKILLS

Python | C | Linux | Rust | OCaml | HTML CSS JS | Cloud Computing

PERSONAL PROJECTS

logic

- Logic is a predicate logic simulator. It can be used to create automated proof.
- GitHub: https://github.com/Vipul-Cariappa/logic

KariLang

- A toy programming language inspired from OCaml language. KariLang can compile and interpret the source code. The compiler is written using the LLVM compiler backend.
- GitHub: https://github.com/Vipul-Cariappa/KariLang

PyC

- PyC is a general-purpose binding between Python Programming Language and C/C++. My goal behind developing this binding is to enable the use of C/C++ libraries inside Python with very few to no modifications to the source libraries and without any recompilations of the original library. PyC is purely written in C. It depends on `libclang` to parse the library's header file to identify symbols.
- GitHub: https://github.com/Vipul-Cariappa/PyC

py-lua

- Similar to PyC, py-lua is also a general purpose binding. This time it is between Python Programming Language and Lua Programming Language. Py-lua lets you use any lua module inside of python and also allows the use of any python module inside lua. It converts data types between the two languages seamlessly and also supports Object Oriented Programming features. It is written in C Programming Language.
- GitHub: https://github.com/Vipul-Cariappa/py-lua

coder

- I was inspired by competitive programming sites like Leetcode and Codewars. I wanted to know how these sites are implemented. So I created my own version of it. People and students wanting to learn to code can try out the challenges available. Here you can create your own questions, to which you need to write a solution and also the test cases to verify if the answer is correct.
- GitHub: https://github.com/Vipul-Cariappa/coder
- Website: https://codeturing.in/

CERTIFICATES

Cloud Digital Leader By Google Cloud