Vipul Cariappa

Student

I love Computer Science and Mathematics. My interests are programming language design, formal logic, and automata theory. I am very fond of open-source technologies and love to contribute. I am trying to learn, explore, and share my findings with others.

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medium.com/@vipulcariappa

EDUCATION

B. Tech in Computer Science and Engineering
Ramaiah University of Applied Sciences

11/2021 - 08/2025 *Bangalore, Karnataka, India*

SKILLS

Python | C/C++ | Rust | HTML/CSS/JS | Linux | Cloud Computing | OCaml | Compilers

WORK EXPERIENCE

Internship
Compiler Research

08/2024 - 12/2024 *Remote*

The Compiler Research organization is part of the Princeton University

- My work focuses on adopting CppInterOp in cppyy, and extending CppInterOp in the process. Cppyy is a Python library used for interoperability with C++. CppInterOp is an incremental compiler.
- Link: https://compiler-research.org/team/VipulCariappa

Internship
Google Summer of Code (GSoC) with Python Software Foundation

05/2024 - 09/2024 *Remote*

LPython Sub-Org. LPython is a statically typed compiled programming language with syntax inspired by Python.

- I worked on implementing a REPL shell and Jupyter Kernel for LPython, and supporting Interoperability between CPython and LPython.
- Link: https://summerofcode.withgoogle.com/programs/2024/projects/4zWsi3Aq

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.

- I worked on improving Octave's octave-pythonic package. Octave-Pythonic provides support for using Python modules within Octave REPL. Octave-Pythonic aims to be MATLAB compatible. My goals were to fix bugs, add in many of the missing features, support the latest version of Python, and resolve issues related to using Octave-Pythonic on Windows
- Link: https://summerofcode.withgoogle.com/programs/2023/projects/aeEAbtyR

SELECT PERSONAL PROJECTS

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

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

PyC
- PyC is a general-purpose binding between Python and C. My goal behind developing this binding is to enable the use of C libraries inside Python with no modifications to the source libraries and without any recompilation.
- 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 and Lua. Py-lua lets you use any Lua module inside Python and also allows the use of any Python module inside Lua. It converts data types between the two languages seamlessly including classes and objects.
- 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 version of it. People and students wanting to learn to code can try out the challenges available. Here you can also post your challenge questions.
- GitHub: https://github.com/Vipul-Cariappa/coder
- Website: https://codeturing.in/

CERTIFICATES

Cloud Digital Leader By Google Cloud