

Dhruv Chawla

Compiler Engineer

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<https://dc03.github.io>
Vellore, Tamil Nadu

A capable programmer learning compiler design and the LLVM compiler infrastructure. Experienced with interpreters, and familiar with systems and assembly programming. 4 years of C++ experience.

Languages

English - Fluent
Hindi - Intermediate

Skills

| | |
|-------------------|------------------------|
| C++ | <div><div></div></div> |
| C | <div><div></div></div> |
| Python | <div><div></div></div> |
| Rust | <div><div></div></div> |
| Compilers | <div><div></div></div> |
| Interpreters | <div><div></div></div> |
| Operating Systems | <div><div></div></div> |
| Linux | <div><div></div></div> |
| Git | <div><div></div></div> |

Education

B.Tech in Information Technology

VIT, Vellore 2020 - 2024
Current CGPA: 9.28

XII (Senior Secondary), CBSE

Navy Children School, Mumbai 2020
Percentage: 96.4%

X (Secondary), CBSE

Navy Children School, Mumbai 2018
Percentage: 93.6%

Experience

Google Summer of Code Contributor (The ENIGMA Team)

June 13, 2022 - September 12, 2022

Project name: Data Buffers / Serialization

- Worked on rewriting most of the frontend of the ENIGMA Development Language compiler, a scripting language based on GML
- Rewrote most of the Binary Buffer system which deals with storing and reading data from byte streams
- Made a serialization and deserialization system which uses template metaprogramming for static polymorphism
- <https://summerofcode.withgoogle.com/programs/2022/projects/BrXiUNA2>

VIT Linux Users' Group - Core Member

December 2020 - January 2022

- Initiated discussions with the rest of the club
- Conducted the event "GIT IT RIGHT", an introduction to the git version control system
- Worked on Arcadia Linux, an in-house Linux distribution

VIT Linux Users' Group - Board Member, Vice Chairman

January 2022 - Present

- Helped set up and coordinate the recruitment forum for the freshers' recruitment process
- Conducted interviews of new recruits
- Conducted the "Quality Control in Open Source Projects" event for VIT Vellore's Quality Week

Projects

| | | |
|--|---|-----------------------|
| nyx | https://github.com/dc03/nyx | <i>September 2020</i> |
| <ul style="list-style-type: none">- A simple, interpreted language implemented in C++- Features classes with constructors and destructors, lists, tuples- Static type system- Copy, reference and move semantics- Bytecode virtual machine- Code formatter, bytecode dumper, VM execution tracing | | |
| rispy | https://github.com/dc03/rispy | <i>February 2022</i> |
| <ul style="list-style-type: none">- Interpreter for a lispy-inspired lisp- Implemented in Rust- Tree-walk interpreter- Testing for lexical analyzer and parser | | |
| tictactoe-arduino | https://github.com/dc03/tictactoe-arduino | <i>February 2023</i> |
| <ul style="list-style-type: none">- Tic-tac-toe implemented on an Arduino Uno- Multiplexing of outputs (LEDs) and inputs (buttons) to reduce pin usage- Compact layout of game state to reduce memory usage- Part of a university course project | | |

Certifications

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| Introduction to Haskell Programming (NPTEL) | <i>Issued Sep 2022</i> |
| Percentage: 85% | Credential ID NPTEL22CS69S2318078809012045 |
| Compiler Design (NPTEL) | <i>Issued Apr 2022</i> |
| Percentage: 90% | Credential ID NPTEL22CS14S2446142802071248 |
| Design and Analysis of Algorithms (NPTEL) | <i>Issued Oct 2021</i> |
| Percentage: 85% | Credential ID NPTEL21CS68S4332059403122958 |