

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: 9.22

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 <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	https://github.com/dc03/nyx	<i>September 2020</i>
rispy <ul style="list-style-type: none">- Interpreter for a lispy-inspired lisp- Implemented in Rust- Tree-walk interpreter- Testing for lexical analyzer and parser	https://github.com/dc03/rispy	<i>February 2022</i>
tictactoe-arduino <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	https://github.com/dc03/mini-utf8	<i>February 2023</i>

Certifications

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