HRISHIT CHAUDHURI

hrishitchaudhuri.github.io

hc4225@nyu.edu

+91-98453-92076

RESEARCH INTERESTS

Compilers, programming languages, verification, formal methods, theoretical computer science.

EDUCATION

2023 – *Present*

COURANT INSTITUTE OF MATHEMATICAL SCIENCES
MS, Computer Science
New York, New York

2019 – 2023

PES UNIVERSITY   **GPA 9.59**
B. Tech, Computer Science & Engineering (First Class with Hons.)
Bangalore, Karnataka

EXPERIENCE

Jan – Jun 2023

QUALCOMM
Engineering Intern | Optimized **LLVM**-based compilers for proprietary microcontrollers. Improved benchmark performance by 8–10%.

May – Aug 2022

INDIAN INSTITUTE OF SCIENCE
Research Intern | Surveyed and integrated neural network verifiers into formal verification framework for cyber–physical systems.

READING PROJECTS

May – Aug 2021

BOOLEAN CIRCUIT COMPLEXITY
Instructor: *Prof. Meena Mahajan.* **The Institute of Mathematical Sciences.**

Jul – Sept 2021

SYSTEMS OF LOGIC FOR VERIFICATION
Instructor: *Prof. Reetinder Sidhu.* **PES University.**

SKILLS

- **Languages.** Python. C/C++. Java. TLA+. Haskell.
- **Frameworks.** LLVM. OpenMP. CUDA. Pthreads. Lex and Yacc. UNIX: bpftrace. gdb. valgrind.
- **Tools.** Git. GitHub. PostgreSQL. Docker. MongoDB.

SCHOLARSHIPS AND RECOGNITION

- **PLMW Scholar.** Symposium on *Principles of Programming Languages 2023* (POPL).
- **CNR Scholar.** PES University. Received for being within top 2% of the department.

OTHER PROJECTS

Sep – Nov 2022

PARCBENCH

Benchmarking for parallel file-system operations. Extended support to **lmbench** framework. Involved **UNIX** kernel programming and the signal pattern.

Sep – Nov 2022

CRAQUED

CRAQ implemented using tinyRPC and zeroMQ. Built-in strong consistency with write latency trade-off and fault detection via probes.

Jan – May 2022

||-SPMV

Fast Boolean matrix multiplication. Using the Four Russians' algorithm with multi-threading using the **OpenMP** framework.

PUBLICATIONS

- *A Comparative Study of Algorithms for Intelligent Traffic Signal Control*. **Hrishit Chaudhuri**, Vibha Masti, Vishruth Veerendranath, S Natarajan. Presented at ICMLAS '21.

TEACHING

- **Teaching Assistant.** *Advanced Algorithms*. Responsible for conducting tutorial sessions, clearing doubts during laboratory classes, preparing assignments, and evaluating projects for 80-odd undergraduate students.