

CHIRAG C DASANNACHARYA

ChiragCD.github.io | github.com/ChiragCD | [Linkedin](#)

EXPERIENCE

Arista Networks

Software Engineer | [Network Platforms, Feature Development](#) | C/C++, Python

Santa Clara

Jan 2024 –

- Participated in bringing up and enabling networking features on a new class of state-of-the-art switches for a new market segment
- Enhanced tooling and software architecture to extend Arista's EOS network operating system to new hardware architectures
- Added relevant test coverage on developing any code, in accordance with Arista's software quality requirements and expectations
- Held responsibility for owning and maintaining some VXLAN related features and assisting with maintenance on related features
- Contributed to design sessions, code reviews, participated in college recruiting, organized company outings and hackathons, etc
- Assisted in mentoring and bringing newer hires up to speed with Arista's extensive internal tooling and product intricacies

Arista Networks

Intern | [Network Platforms, Virtual Networks](#) | C/C++, Python

Santa Clara

Jun – Sep 2023

- Built a network security debugging tool that simulates firewall behavior on the router based on configured policy
- Added IPv6 support for VARP, Arista's proprietary VXLAN virtual network routing framework, on Broadcom chipsets
- Added tests to ensure software quality and feature coverage for IPv6 VARP

Nutanix

Intern, Member of Technical Staff | [Distributed Systems, Cloud Storage](#) | C/C++, Python, Go, AWS S3

(Remote) Bangalore

Jan – June 2022

- Upgraded multi-cloud garbage collection to make use of AWS S3 lifecycle policies and object versioning
- Eliminated operational costs associated with multi-cloud garbage collection and simplified workflows
- Integrated an S3 object-based protocol server with Nutanix's distributed file server to provide S3 access to file storage

COMPETENCIES

Programming Languages: C/C++, Python, Golang, Rust, Java

Frameworks and Tools: Linux, GDB, Git, Perforce, AWS, Docker, REST APIs, Makefiles

Areas - [Networks](#), [Computer Architecture](#), [Operating Systems](#), [Cloud Computing](#), [Embedded Systems](#), [Compilers](#)

EDUCATION

University of California, San Diego - MS Computer Science (Systems Track)

2022 – 2023

Birla Institute of Technology and Science, Pilani - BE Computer Science (with Distinction)

2018 – 2022

PUBLICATIONS

D-MRFTE: A Decentralized Relay-Based Approach for Multi-Robot Unknown Area Exploration | [\(DOI\)](#) | IEEE ROBIO

Dec 2023

Automated generation of floorplans with non-rectangular rooms | [\(DOI\)](#) | Graphical Models

May 2023

Multi-Robot Unknown Area Exploration Using Frontier Trees | [\(DOI\)](#) | IEEE IROS 2022

Oct 2022

PROJECTS

Quadcopter Drone | [\(Link\)](#) | [C++](#), [Control Systems](#), [Robotics](#)

2023

- Led a team in circuit design, assembly and bring up of a fully functioning drone from scratch
- Implemented low level filtering and fusion of sensing data along with reliable R/C communication with the remote
- Implemented flight software using modified PID control algorithms to maintain stability and responsiveness in flight

Compiler | [\(Link\)](#) | [x86](#), [Rust](#), [Assembly](#)

2023

- Wrote a compiler with optimizations from scratch in Rust with libraries in assembly, following x86 calling conventions
- Implemented I/O and functions with optimizations to minimize moves by writing directly to destination locations
- Added heap memory allocation with assembly level system calls, along with a compacting automatic garbage collector
- Optimized to track types and minimize dynamic checks, removed stack usage wherever possible in favor of registers

ACHIEVEMENTS, ADDITIONAL EXPERIENCE

Datakrew/NTU Singapore - Summer 2021 NTU Connect intern on Datakrew's IoT platform (data processing flows, testing)

BISAG-N Gandhinagar - Summer 2020 Research Asst (Wrote a QGIS python-plugin to get temperature from Landsat images)

BITS Pilani Merit Scholarship - 2020-22 - Awarded to top 3% of students each semester, 6 time awardee

ACM Student Chapter BITS Pilani - 2018-22 - Core Team member

International Linguistics Olympiad - 2017 bronze medal winner and 2018 participant