# CHIRAG C DASANNACHARYA

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# **EDUCATION**

University of California, San Diego - Master of Science in Computer Science

Sep 2022 – Dec 2023 (Expected)

# Birla Institute of Technology and Science, Pilani

2018 - 2022

Bachelor of Engineering in Computer Science (with distinction, CGPA - 9.58/10)

Courses - Operating Systems, Computer Architecture, Networks, Cloud Computing, Compilers, Algorithms, Microprocessors

#### EXPERIENCE

#### **Nutanix Technologies**

(Remote) Bangalore, India

Intern, Member of Technical Staff | Distributed Systems, Cloud Storage | C/C++, Python, Golang; AWS S3

Jan 2022 – June 2022

- Eliminated operational costs associated with garbage collection and simplified workflows
- Upgraded multi-cloud garbage collection to use AWS S3 lifecycle policies and object versioning
- Integrated an S3 object-based protocol server with the file server to provide S3 access to file storage
- Developed features for cloud storage; worked with distributed file servers, object stores and AWS S3

#### INSPIRE Lab, BITS Pilani

Pilani, India

Undergraduate Researcher | Multi-Agent Systems | C/C++, Boost, Player/Stage

Jan 2021 - Dec 2021

- Proposed strategies comparable to state-of-the-art for multi-robot area exploration, paper accepted at IROS 2022
- Developed solutions for cooperation with limited data in an unreliable communication environment
- Developed methods to ensure coordination, state management and fault tolerance in a decentralized setup
- Worked with path planning (A\*, JPS), implemented and simulated strategies using C++

### Nanyang Technological University / Datakrew Pte Ltd

(Remote) Singapore

Summer Scholar / Industry Intern | Backend Development | Elixir

May 2021 – July 2021

- Part of NTU Singapore's Connect program, involving Datakrew's MADS IoT platform
- Developed analytics data collection and aggregation flows; wrote tests to improve coverage

#### Bhaskaracharya Inst. for Space Applications and Geo-informatics

(Remote) Gandhinagar, India May 2020 – July 2020

Research Assistant | Open Source | Python, QGIS

Developed a QGIS plugin to obtain land surface temperature and statistics from satellite images

# **PROJECTS**

#### **Interpreter** | (Link) | *Programming Languages, C programming*

2020 - 2022

• Developed a grammar and building an interpreter for an imperative programming language

## Cloud Orchestration System | (Link) | Distributed Systems, Network Programming

Nov 2021

• Built a cloud system with services and containerization, orchestration, autoscaling, monitoring, etc

#### Google File System | (Link) | File Systems, Distributed Systems

Oct 2020

• Implemented GFS with metadata server, chunk servers and client mechanisms

# Other Systems and Network Projects | (Link) | Computer Systems, C programming

2020 -

• Implemented a concurrent TFTP server; terminal shell with piping and redirects; distributed merge sorting

# **PUBLICATIONS**

Multi-Robot Unknown Area Exploration Using Frontier Trees | IEEE IROS 2022

October 2022 (Upcoming)

#### SKILLS, ADDITIONAL DETAILS

Programming Languages and Tools: C/C++, Python, Java, Golang; Linux, Makefiles, Wireshark, GDB; AWS S3, REST APIs

BITS Pilani Merit Scholarship - 2020-22 - Awarded to top 3% of students each semester, 5 time awardee

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

International Linguistics Olympiad - 2017 bronze medal winner and 2018 participant