Divyang Mittal

2 Saint Nicholas Terrace, New York, NY 10027
+1 5167085841 | dm3880@columbia.edu | https://www.linkedin.com/in/divyang-mittal/

EDUCATION

Columbia University — New York, NY
M.S. Computer Science, Software Systems Track — Expected Dec 2024

Indian Institute of Technology Kharagpur — Kharagpur, IN
B.Tech. Computer Science And Engineering — Apr 2021

CGPA 9.28/10.00. Data Structures, Algorithms, Operating Systems, Networks, Machine Learning, NLP.

SKILLS

Languages: C, C++, JAVA, Go, Python, Javascript, HTML, CSS.
Framework and Libraries: Microservices, Kafka Streams, Flask, Django, ReactiveX, Resilience4J, log4j.
Databases: RocksDB, Caffeine, Prometheus, MySQL, Postgres, MongoDB.
Other Tools: Docker, Kubernetes, AWS, Grafana, Helm, Splunk, Fluentbit, PostMan, Linux, Git, MapReduce.

PROFESSIONAL EXPERIENCE

Appdynamics, Cisco — Bangalore, IN
Software Engineer - Backend Developer — Jul 2021 - Jul 2023

- Added and owned features in microservices of data platform to process high scale of packets using Kafka Streams.
- Devised a two-level cache system with RocksDB and caffeine, reduced overall processing latency of packets by 20%.
- Led initiative to store requests logs to S3 buckets for security compliance, implemented with Kubernetes and Fluentbit.
- Remodeled the API calls and added support for pagination and resiliency against multiple call failures.
- Designed a library for reporting SLI and guided its implementation across five teams.

Complex Networks Research Group, IIT Kharagpur — Kharagpur, IN
Research Assistant — Feb 2020 - Dec 2020

- Developed a video conferencing system by leveraging a mesh network; scalable to 5 users.
- Built a working prototype by using WebRTC protocol with Javascript and Node.Js.
- Achieved a 100% increase in maximum user limit by leveraging a semi-distributed architecture.

Appdynamics, Cisco — Bangalore, IN
Software Engineer Intern — May 2020 - Jul 2020

- Improved query time of data from S3 Buckets by up to 40% through an indexing mechanism.
- Utilized ranged based partitioning along with equal sized partitions to prevent small file problems.

PROJECTS

Distributed Key Value Store - Distributed Systems — Sep 2023 - Dec 2023

- Implemented paxos library using Golang to create a distributed log to maintain sequential consistency of operations.
- Utilized distributed log to serve client requests, ensuring at most once semantics.

Study Buddy Database Application - Database Systems — Oct 2023 - Dec 2023

- Developed a social web application to find tutors and study partners for courses. Implemented using Python, Javascript, CSS, HTML, Django, and PostgreSQL.
- Used features of PostgreSQL; triggers and text search to implement gpa calculation and text query.

Foodborne Project - Graduate Researcher — Oct 2023 - Dec 2023

- Setup and migrated server for foodborne project including docker containers and data present in MongoDB database.
- Setup an alerting mechanism to reduce downtime of service. Wrote bash scripts to validate data transfer.

Cluster Middleware System - Distributed Systems — Jan 2021 - Apr 2021

- Designed a distributed system with load balancing, matchmaking and fault tolerance for computational workloads.
- Accomplished fault tolerance against one master node and any number of computation nodes.

Lexical Complexity Prediction - Natural Language Processing — Jan 2021 - Apr 2021

- Developed a system to predict lexical complexity of words in English Sentences on a 5 - point scale
- Designed a Hybrid Machine Learning Model, achieving Pearson's r of 0.74 on test data
- Experimented with models GPT2, RoBERTa achieving best Pearson's r of 0.8 on test data

File System for Linux Kernel - Operating Systems — Aug 2020 - Dec 2020

- Devised a file system to perform CRUD operations on files and directories. Programmed in C for linux kernel.
- Resolved issue of testing file system over raw disk by emulating a memory system of 4KB blocks.

CO-CURRICULAR ACTIVITIES

- 4th rank in Columbia ICPC qualifiers among 200 students, Member of ICPC silver team at Columbia University.
- Won the Appdynamics 2022 hackathon, in a team of five among 20 participant teams
- Served as President of CodeClub, CS Department society, for academic session 2020-2021.
- Ranked 214 among 1 million plus candidates in Joint Engineering Entrance Exam 2017.