Divya Chauhan

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Education

GPA: 8.5/10 **BTech in Computer Science and Engineering**, *Indian Institute of Technology Kanpur* *2016-2020*

Work Experience

Google, Software Engineer *Bengaluru, India*

Unified Fulfillment Optimization, Google Cloud *Oct 2022 - Present*

- Maintain software to monitor the fleet's health by detecting and mitigating hardware failures.
- Improved the mean time to repair (MTTR) with reduced cost by optimizing repair actions for faulty hardware.
- Onboarded new hardware, including A3 Supercomputer (Nvidia H100 Tensor Core GPU), into Google's Datacenter.
- Actively working on accelerating time-to-market for new hardware with reduced developer toil and improved deployment efficiency by leveraging industry-standard Redfish and writing composable, model-based self-service health rules.

Goldman Sachs, Analyst *Bengaluru, India*

FICC SMM, Global Markets Division *Oct 2020 - Oct 2022*

- Developed low-latency C++ applications to onboard new exchanges; retrieved real-time market data present in various financial protocols for internal clients' consumption.
- Served as the primary point of contact for Asia-Pacific venues.
- Developed and maintained an application to upload daily market data to AWS S3 to facilitate research activities.

Flipkart, Software Engineer Intern *May 2019 - Jul 2019*

- Automated the process of (de-) whitelisting of customers for the Buy Now Pay Later (BNPL) feature.
- Developed a user dashboard and built APIs to generate relevant metrics used to define credit amounts for whitelisted customers.

NxtBig Software Labs, Web Development Intern *May 2020 - Aug 2020*

- Developed the front-end of the Income Tax Filing Application for Indian soldiers using the Mobile First approach.

Projects

Gem5 Statistics, Prof. Debadatta Mishra *Jan 2023 - April 2023*

- Enhanced Gem5 to provide a breakdown of scalar and vector-based statistics at a more granular level.
- Refined GemOS to define different regions (eg: regions corresponding to user mode and kernel mode) for statistical monitoring and relayed the information via MSR registers to Gem5.
- Leveraged these granular statistics to analyze cache performance in user and kernel mode.

CS335 Golang to x86 Compiler, Prof. Amey Karkare *Jan 2019 - April 2019*

- Implemented a Golang to x86 compiler in Python from scratch for Go language.
- Created a Lexical Analyzer using ply/yacc, Parser, Intermediate Code Generator, and Assembly Code Generator.

CS330 Building Operating system GemOS, Prof. Debadatta Mishra *Aug 2018 - Nov 2018*

- Built Paging structures using context creation, mapped physical memory according to its virtual address layout.
- Implemented the major page fault exception handlers, system calls, and basic interrupt and signal handlers.

Miscellaneous Projects

CS360 Computer Graphics, Prof. Vinay Namboodri *Aug 2019 - Nov 2019*

- Built a 3D maze game with OpenGL and GLEW, employing DFS for maze generation and texture mapping and image-based rendering to render walls, floor, and grass. [Code]

CS315 DBMS, Prof. Arnab Bhattacharya *Jan 2019 - April 2019*

- Created ER diagram and implemented SQL-based crime-related database. [Code]

CS771 Few Shot Learning, Prof. Piyush Rai *Aug 2018 - Nov 2018*

- Implemented a Relation Network for Zero-Shot Learning; built a classifier to recognize new classes with no examples. [Code]

Treadwill - Depression Therapy using CBT, Prof. Nitin Gupta *May 2017 - July 2018*

- Contributed to the development of treadwill.org which aims to help individuals deal with depressive symptoms.
- Built a Chit-Chat and patient listener bot with AIML and Python, including data structuring and AIML file conversion module.

Extracurricular Activity

Teaching Assistant ESO207A: Data Structures and Algorithms Prof Raghunath Tewari *Jan 2020 - Apr 2020*

- Prepared question papers and graded them

Shiksha Sopan (IIT Kanpur based NGO) *Aug 2017 - Nov 2017*

- Taught Mathematics to 40+ Grade VI children with planned assessments

Skills

Programming Proficient: C/C++, | Familiar: Javascript, Java, Python, Bash
Utilities and Tools Git, Vim, Linux shell utilities, LaTeX, Docker