

Aman Chopra

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EDUCATION

Courant Institute of Mathematical Sciences - New York University, NY, USA

Master of Science in Computer Science

Dec 2022

GPA: 3.92/4

Manipal Institute of Technology, Manipal, India

Bachelors in Information and Communication Technology with a minor in Soft Computing

July 2018

CGPA: 8.83/10

SOFTWARE SKILLS AND COURSES

- **Languages:** C, C++, Java, Python, Node.js, JavaScript
- **Database Management:** SQL, MongoDB, DynamoDB, Redis, Firebase
- **Machine Learning:** R, TensorFlow, Keras, NLTK, NumPy, Pandas, Matplotlib, ELK
- **Other Technologies:** Angular, React, Electron, Express, Thrift, Spark, Docker, Kubernetes, Kafka, AWS, Git

PROFESSIONAL EXPERIENCE

Amazon, New York City, USA

Software Development Engineer 2 – AWS Connect

Dec 2024 –

- Designing and implementing an intelligent routing system to direct customer contacts to the most optimal agents based on business criteria and agent proficiencies, aimed at improving operational efficiency and customer satisfaction.

Software Development Engineer – AWS Connect

Feb 2023 – Nov 2024

- Led the expansion of programmatic resource configuration capabilities in Amazon Connect, enabling customers in new regions to automate and manage their contact center operations effectively.
- Scaled public APIs for resource configuration by increasing the default limit from 2 TPS to 10 TPS, improving customer experience.
- Designed public APIs for configuring holiday and event-specific operating hours, making it easier for businesses to adjust schedules and maintain consistent customer support.

Software Development Engineer Intern – AWS Connect

May 2022 – Aug 2022

- Worked with **Distributed Cache** to remove **Invalid Cached Access Tokens** after user's password was reset.
- Implemented a feature to log users out of all active Connect instances leveraging **DynamoDB** for **Session Management** safeguarding service from a potential security vulnerability.

Samsung Semiconductor India R&D, Bengaluru, India

Software Engineer - India Memory Solutions Team - Host Software

July 2018 – Dec 2020

- Enhanced a **C++ library** called MSVP enabling test script writers to perform quality checks, firmware testing, and spec compliance testing of SSD. MSVP is used worldwide across Samsung by 15+ teams to validate storage controllers and firmware.
- Developed a cross-platform desktop GUI application leveraging **Electron** and **AngularJS** utilizing the above C++ library.
- Architected a **tool-agnostic framework** to integrate drive performance analysis and benchmarking features in the above application using third-party tools like **lometer** and **FIO** along with visualization of output data through **Chart.js** library.
- Designed a scalable **distributed system** of interconnected test machines responsible for SSD Validation. Performed large-scale analysis and management of test execution, log collection, and result synchronization **reducing error resolution time by 30%**.

ACADEMIC PROJECTS

Abstractive Text Summarisation

New York University

- Built a **Transformer** based model to generate headlines from news data collected from Inshorts news dataset (ROUGE-0.35).
- Compared performance and efficiency of Bi-LSTMs with Attention and Transformer-based Networks (More efficient).

RepCRec – Replicated Concurrency Control and Recovery

New York University

- Implemented a **distributed database** with multi-version concurrency control, deadlock detection, replication, and failure recovery. Algorithms used: Available copies approach using strict two-phase locking.

Multi Modal Multi Environment Performance Comparison on Google Cloud

New York University

- Compared performance of Virtual Machines, **Docker** running inside **Virtual Machine**, and **Singularity** running inside Virtual Machine on two different workloads, CNN for MNIST digit classification and RNN for Sentiment Analysis.

RESEARCH AND PUBLICATIONS

- Mid Roll advertisement placement using Multi Modal Emotion Analysis. *ICANN 2019, Germany*
- Real Time prediction of American Sign Language using Convolutional Neural Networks. *ICACDS 2019, India*
- Comparative Analysis of Statistical Classifiers for predicting News Popularity on Social Web. *ICCCI 2019, India*
- Prediction of Factors Affecting Amlodipine Induced Pedal Edema and its classification. *ICACCI 2017, India*

LEADERSHIP AND AWARDS

- Graduate Teaching Assistant of Operating Systems and Multicore Processors at New York University.
- Led a team of 5 Interns at Samsung working on an ELK pipeline for efficient test log collection, analysis, and visualization.
- Awarded with EOM and Spot Awards at Samsung for contribution towards Centralized Analysis and Management Platform.