

# Aman Chopra

Phone: +1-(551)-220-7830 | Email: ac8511@nyu.edu | [GitHub](#): Aman-Chopra | [LinkedIn](#): amchopra1 | NJ-07310

## EDUCATION

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

Dec 2022

Master of Science in Computer Science

GPA: 3.92/4

### Manipal Institute of Technology, Manipal, India

July 2018

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

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 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

Senior 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.
- Programmed a client-side remote test execution utility in Electron and Node.js to execute test scripts via **sockets** and synchronize and upload logs to C++-based servers.
- 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%**.

Software Intern - India Memory Solutions Team - Host Software

Jan 2018 – June 2018

- Engineered migration of the MSVP C++ library from **Windows to Linux** to make it **cross-platform** leveraging **Boost** library and a custom Operating System Agnostic Layer implementation. Optimized the library to **reduce test script execution time by 10%**.

### Goldman Sachs, Bengaluru, India

Summer Analyst – Human Capital Management Technology

May 2017 – July 2017

- Built a scheduling assistant and a meeting room booking web application, in **Node.js**, **AngularJS**, and **Java**.

## 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.