Aman Chopra

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EDUCATION

Courant Institute of Mathematical Sciences - New York University, NY, USA **Dec 2022(expected)**
Master of Science in Computer Science *GPA:3.95/4*

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, HTML, CSS, JavaScript, TypeScript | Database Management: SQL, MongoDB, Firebase
- Machine Learning and Data Processing: R, TensorFlow, Keras, NLTK, NumPy, pandas, Matplotlib, ELK
- Other Technologies: Node.js, Angular, Electron, Express, AWS, Git
- MOOC: CNN, Neural Networks and Deep Learning, AI for Everyone, AWS Certified Developer, React, Microservices

PROFESSIONAL EXPERIENCE

Samsung Semiconductor India R&D, Bengaluru, India
Senior Engineer - India Memory Solutions Team - Host Software **July 2018 – Dec 2020**

- Contributed to a C++ library called MSVP that enabled test script writers to carry out validation, quality checks, firmware testing, and spec compliance testing of Solid-state drives. This library is the single tool used worldwide across Samsung by 15+ teams to validate storage controllers and firmware developed for vendors like HPE and Dell for all market SSD products.
- Developed a cross-platform desktop GUI application using Electron and AngularJS which utilized 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 Iometer and FIO along with visualization of output data using the Chart.js library.
- Developed a client-side remote test execution utility using Electron and Node.js for executing test scripts via sockets and synchronizing and uploading logs to C++-based servers**.**
- Designed a fully scalable system of interconnected test machines responsible for SSD Validation using the MEAN stack, with the goal being large-scale analysis and management of test execution, test log collection, and result synchronization.

Student Intern - India Memory Solutions Team - Host Software **Jan 2018 – June 2018**

- Ported the MSVP C++ library from Windows to Linux to make it cross-platform, using the Boost library and a custom Operating System Agnostic Layer implementation. Optimized the library to reduce the 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, using Node.js, AngularJS, and Java.

ACADEMIC PROJECTS

Performance Prediction of Multi-threaded Applications **New York University**

- Analyzed several regression models to predict the performance of multi-threaded applications where the performance measure is the speedup relative to single thread execution (Mean Average Error – 0.032).

RepCRec – Replicated Concurrency Control and Recovery **New York University**

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

Gensini Predictor **Manipal University**

- Built an ANN model to predict the Gensini score which indicates the severity of Coronary Artery Diseases (CAD) (RMSE – 6.170).
- Designed the model to find the association of Insulin resistance, hsCRP, and Lp(a) with the severity of CAD.

Cardigram - Personalized health care profiling and analysis (Web/Android) **Manipal University**

- Created applications to track and display health statistics using data analysis and securely store medical data of the users.
- Implemented the Naïve Bayes classifier from scratch using Java to predict disease based on symptoms.

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

- Teaching Assistant of Algorithmic Problem Solving (Spring), Data Structures (Summer), and Multicore Processors (Fall) at NYU.
- Led a team of Student Interns at Samsung working on an ELK pipeline for efficient test log collection, analysis and visualization.
- EOM Award at Samsung for outstanding contribution towards Centralized Analysis and Management Platform (CAMP).
- Spot Award at Samsung for designing and implementing a modularized and extensible architecture for CAMP.
- Technical Secretary of IEEE Student Branch Manipal (SBM) and Event-Head for IEEE SBM annual technical festival in 2017.