# AYUSH GUPTA

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#### **EDUCATION**

Bachelor and Master of Technology in Computer Science and Engineering

May 2014 - July 2019

Indian Institute of Technology, Delhi, CGPA: 8.01/10

#### **INTERNSHIPS**

Works Applications Co. Ltd., Tokyo: Enterprise User Search for Scheduler May 2017 - July 2017

- · Developed a User recommendation engine in Apache Spark using ensemble of SVD and Co-Occurrence data.
- · Implemented and tested other techniques like Hierarchical User Clustering and Collaborative Filtering.
- · Devised strategy to test and save Model in RedisDB and fetch recommendations efficiently in Front End.

# Goldman Sachs, Bangalore: Feature Recognition in Financial greeks

May 2018 - July 2018

- · Implemented targeted checks for some financial security types by observing coarse expected behaviors of greeks
- · Built framework for data driven checks in standard regulatory stress scenarios using outlier, clustering algorithms

Loughborough University, UK: Emotions and Meanings in Dance Movements May 2016 - July 2016

- · Developed Human movement simulation tool using quaternion data of IMUs for mapping patterns to meaning.
- · Explored algorithms to extract meanings out of movements by the functional grammar developed using SFL.

### **PROJECTS**

# Poverty Mapping using Satellite Data (Prof. Aaditeshwar Seth)

July 2017 - May 2018

- · Built Models for census labels prediction at village granularity using transfer learning; CNNs trained from scratch
- · Developed Built-up area classifers in GEE using Random Forests, Cart and SVM on Landsat, Nightlights data

# A basic functional shell (Prof. Sorav Bansal)

Jan 2017 - May 2017

- · Implemented functionalities like port and memory mapped IO, and threads via stackless coroutines and fibers
- · Added non-preemptive and preemptive scheduling and a Single Producer Single Consumer queue for concurrency

#### Cloud Computing Projects (Prof. S C Gupta)

July 2017 - Nov 2017

- · Designed Schemes for Consolidation, Partitioning, Replication, SnapShoting for Simulation of Disk Virtualization
- · Deployed Mini Social Application on Azure; Designed user databasing schemes using Object and Table Storage

# Blockchain Projects (Prof. Vinay Ribeiro)

Jan 2018 - May 2018

- · Built P2P cryptocurrency simulator, designed blocks, transaction broadcasting schemes with proper fork resolution
- · Deployed Smart Contract for Media Distribution on Ethereum Testnet with offchain encryption-decryption UI

#### TECHNICAL SKILLS

Programming Languages

 $C++,\,JAVA,\,Python,\,MATLAB,\,Scala,\,R,\,Bash\,\,Scripting,\,Standard\,\,ML,\,JavaScript$ 

Frameworks and Libraries Scikit-learn, TensorFlow, Android Studio, Apache Spark, CUDA, OpenMP

#### SCHOLASTIC ACHIEVEMENTS & HACKATHONS

- · Rivigo Coding Championship: National Runner-Up in NP-Hard Problem Solving Contest (8000+ teams) 2018
- Facebook Hacker Cup: Reached Round 2 by clearing qualification and Round 1 in the Last Edition. 2017
- · Asian Physics Olympiad: Won bronze medal at the 15th Asian Physics Olympiad, Singapore. 2014
- · KVPY: Secured All India Rank-14 and awarded prestigious fellowship by IISc, Bangalore. 2012

## **COURSE WORK**

Parallel and Distributed Systems, Computer Networks, Database Management Systems, Analysis & Design Of Algorithms, Operating Systems, Cloud Computing Fundamentals, Wireless Networks, Artificial Intelligence, Software Design Practices, Discrete Mathematical Structures, Probability & Stochastic Processes, Microeconomics.