SUMIT AGARWAL

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EDUCATION

STONY BROOK UNIVERSITY — New York (NY), USA

Master of Science (MS) in Computer Science, **GPA**: 3.83/4.0 — Aug'19 - Dec'20

- **Coursework**: Fundamentals of Computer Networks, Analysis of Algorithms, Natural Language Processing, Machine Learning, Probability & Statistics for Data Science, Data Science Fundamentals
- Winner of Hack@CEWIT 2020 - Best Security Hack: The Future of Safety: Password less Ultra Sonic

BIRLA INSTITUTE OF TECHNOLOGY, MESRA — Ranchi, India

Bachelor of Engineering (BE) in Computer Science, **GPA**: *8.15/10.0* — July'12 - May'16

- **Coursework**: Data Structure & Algorithms, Operating Systems, Compilers, Database Management System, Software Engineering
- National Rank 95 in **ACM ICPC 2015** India (Chennai) Regional
- **Publication**: R Harsh, **A Sumit** et al. *Automatic labelling of important terms and phrases from medical discussions* IEEE, CICT-2017

SKILLS

Programming Language: *(experienced)* C/C++, Java, *(familiar)* Python, GO, JavaScript, HTML/CSS, SQL

Machine Learning: (*familiar*) TensorFlow, scikit-learn, NLTK, numpy

Operating System: Windows, Linux

Frameworks: RxJava, JGraphT, Go-Fx, bazel, git, Protocol Buffers

Web: Grizzly, Jersey, gRPC, React, Redux, Vis.js

WORK EXPERIENCE

UBER — San Francisco, US

Software Engineer Intern, *Marketplace Rider Promotions* — May'20 – Aug'20

- Improved Uber's Rider app UX experimentation velocity by removing overhead of code change & deployment by developing configuration-driven framework in **GO**, allowing toggle/customization of UX during runtime.
- Redesigned real-time gRPC based APIs for backend-for-frontend webservice using in-house distributed relational database supporting User-Defined data types and Materialized View

GOLDMAN SACHS — Bengaluru, India

Software Engineer 2 | Associate, *Platform Engineering* — Jun'16 – July'19

Feedback guided Anomaly Detection via DAG in Financial Products

- Created Data Quality tool, used firm-wide, to achieve seamless product trading by building Reinforcement Learning Model (RL) in **Java** to proactively detect outliers in financial products with an accuracy of 85%
- Improved accuracy by 10% by reducing heuristic loss of RL model by incorporating interactive Feedback Loop, which required building microservices, running in 2 clusters, in **Java** & designing Feedback Interface in **React**
  Algorithms/Technologies – Frequent Subgraph Mining (gSPAN), Minimum Description Length, JGraphT, Vis.js, Inter Process Communication, Asynchronous Request/Response pattern, REST, Distributed Cloud Computing

Distributed Data Reconciliation Platform

- Increased Goldman's Data Distribution platform throughput 20 times by reconciling data across datastore using Merkle Trees & MD5 checksum (hashing) in **Java** & located inconsistency in logarithmic time (log n)

Runtime Enhancement to Webservice Hosting Platform

- Achieved fault tolerance in Goldman's ServiceCloud platform by integrating in-house Process Scheduler in **Java** as a backup runtime environment

Software Engineer Intern | Summer Analyst, Platform Engineering — May'15 – July'15

- Learned in-house Scheduler in 2 months and implemented a system to automate scheduling of Event Based Stream jobs in **Java** to save 40+ man hour

ACADEMIC PROJECTS

- **Personality Prediction -** Predicted 9 different personalities for 174k Twitter users from 50 million tweets with an accuracy of 75%. Applied Ridge Linear Regression in **Python** on Open-Vocabulary features like n-grams and Facebook LDA topics — May'20
- **Word2Vec –** Implemented Skip-gram Model using Cross Entropy and Noise Contrastive Estimation loss function in **Python** to learn word embedding and applied the learned embeddings to word analogy test — Sep'19
- **Sentiment Analysis –** Implemented Deep Averaging Network (DAN) and Gated Recurrent Units (GRU) in **Python** to represent sentence & applied this representation to train model for sentiment task and achieved an accuracy of 93 % — Oct'19
- **DNS Resolver –** Implemented a DNS resolver in **Python** to resolve website name to IP by iteratively querying DNS name servers Framework – dnspython — Sep'19