ATRAYEE NAG

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EXPERIENCE

Software Engineer	Goldman Sachs	Mar 2020 - Present

Team: Corporate Treasury
- Performed full-stack development of a time series model which automated the quantification of variances in net liquidity of the firm saving ~2 hours on the previous manual excel-based reporting. (*Java, React, Tableau*)
- Engineered a database model using the concept of partitioning to create month-sharded tables on data rundates and using union operators to limit tables queried by view query, to store frequently updated business hierarchy data. (*Sybase IQ*)
- Conducted telephonic and onsite interviews and mentored young prospects/junior developers.

Software Engineer Intern	Visteon Corporation	May 2019 - Aug 2019

Team: Advanced Driver-assistance Systems
- Reduced the Class Imbalance problem in the object-detection datasets using the under-sampling approach. (*Python*)
- Developed scripts to pre-process datasets to improve accuracy for the models, organizing the datasets with different pixel sizes for better analysis of the input provided to the models and how they perform. (*Python*)

Software Engineer	Tata Consultancy Services	Mar 2014 - Jul 2018

Team: JD Williams - N Brown Group, Acuity - Mcgraw-Hill Education
- Customized Hybris 6.5 (Java-based E-comm platform) OOTB functionaries, developed REST Web Services to integrate with Oracle SOA suite, test cases using Junit, validated coverage in SonarQube reports. Worked in agile - CI/CD. (*Java*)
- Integrated CRM data into an analytics platform which helped to achieve relevant levels of personalization and an uplift of 18% in new visitor conversion within two weeks. (*Java, Javascript*)
- Undertook the development of an online assessment platform using ShadowCAT algorithm - a ranking-based approach.

LANGUAGES AND TECHNOLOGIES

- **Languages**: Java, Python, Javascript, R, PHP
- **Frameworks**: Hybris Commerce 6.5, Spring MVC, Hibernate, Junit, Maverick, jQuery, React
- **Databases**: Oracle, MySQL, DB2, Sybase IQ, SQL Server
- **AI/ML**: Caffe, Keras, Tensorflow, Scikit-learn, Pandas, Numpy, Matplotlib, OpenCV
- **Others**: Hadoop, Docker, AWS, Informatica, Tableau, Crystal Reports, Bitbucket, Git, Svn, Cvs

EDUCATION

State University Of New York At Buffalo	Aug 2018 - Feb 2020

Master of Science; Major in Computer and Information Science
- Relevant Courses: Algorithms Analysis and Design, Computer Security, Distributed Systems, Data-Intensive Computing

West Bengal University of Technology	Aug 2009 - Jul 2013

Bachelor of Technology; Major in Computer Science and Engineering
- Relevant Courses: Data Structures, Operating System, Database Management System, Artificial Intelligence

PROJECTS

- **Group Messenger:** A distributed peer-to-peer group messaging app that guarantees Total-FIFO ordering using ISIS algorithm. The system is fault-tolerant and easily scalable. (*Java, Android, Socket*)
- **Big Data Analysis and Visualization:** Using multiple live data sources, engineered a data acquisition and analytics pipeline that explored data on top companies (*Python, Hadoop, MapReduce, spaCy, D3, Docker*)
- **Simple DHT:** A peer-to-peer distributed hash table based on the Chord protocol, providing ID space partitioning/ re-partitioning, node joins, and ring based routing for insert, delete, and query operations. (Java, Android, Socket)
- **Simple Dynamo:** Amazon Dynamo styled key-value storage with partitioning, quorum-based replication, and failure handling, guaranteeing simultaneous availability, linearizability, and eventual consistency. (*Java, Android, Socket*)
- **Key Point Detection and Hough Transform:** Implemented SIFT algorithm for Key-point detection in an image, Cursor detection from a set of images, developed Hough transform feature extraction algorithm to detect lines & circles. (*Python*)

PROFESSIONAL HONORS

- On the Spot Award (2018)
- Initial Learning Program Kudos Award (2014)