APURBA MAHANTA

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EDUCATION

- **University at Buffalo, The State University of New York**   **Aug 2018 - Dec 2019**
  Master of Science, Computer Science, GPA: 3.46/4.
  Graduate Coursework - Advance Machine Learning, Computer Vision and Image Processing, Algorithm Design Analysis, Distributed Systems, Data Intensive Computing, Computer Security, Software Engineering.
- **VIT University, Vellore, India**   **July 2011 - June 2015**
  Bachelor of Technology, Computer Science & Engineering, GPA: 8.48/10
  Courses: Data Structures, Computer Networks, Operating System, Database Management System.

PROFESSIONAL EXPERIENCE

Publicis Sapient – Software Engineer   **July 2015 - June 2018**
(Technology Consultant at Morgan Stanley)

- Developed the data ingestion framework with a very performant / scalable code running on top of Big data platforms that ingests **terabytes** of files every day into hdfs. Data loading timings improved massively, loading **400 million rows under 4 minutes.** Impala query timings was also **2.9x faster** than Greenplum for analytical queries.

- Revamped the Data aggregation framework codebase, analyzed garbage collection logs, leveraging JProfiler/VisualVM to identify hotspots in code. Final build provided **30% more throughput consuming 50% less memory**.

- Developed a publisher-subscriber based model following agile methodology for allowing users to run dynamic queries on Greenplum database and notifying them via multiple channels. Used load balancing technique to handle multiple requests

ACADEMIC AND RESEARCH PROJECTS   **August 2018 - Present**

- **Distributed key value storage on Android (Amazon Dynamo)**- Implemented a failure resilient distributed key-value storage inspired by Amazon Dynamo that provides Linearizability and availability. *Java, Android, Socket Programming.*
- **Distributed Hashtable on Android -** Implemented a distributed hash-table based on Chord that provides node joins, ID space partitioning and ring based routing. *Java, Android, Socket Programming, Chord*
- **Group Messenger Application-** Implemented a group messenger system using ISIS algorithm while maintaining FIFO and Total ordering with a local persistent key value storage. Features include scalability, reliability and fault tolerance.
- **BigData Analysis and Visualization** - Implemented data acquisition and analytics pipeline to fetch data from multiple live data sources. Explored using Hadoop MapReduce and illustrated the conclusion using Tableau.
- **Exploratory Data Analysis - R**: Analyzed and performed Exploratory data analysis on Influenza outbreak in United States by extracting tweets using Twitter rest api and comparing the data with official statistics.
- **Handwritten data recognition in forensics-** Developed an Explainable AI system based on Bayesian Inference model and Deep learning models (Autoencoder and Siamese network) to distinguish between same and different writers.
- **Hierarchical Variational Autoencoder for Music-** Developed a generative novel model on Hierarchical Variational Autoencoder based on Google Magneta's work for music interpolation between music melodies.
- **Reinforcement Learning using Deep Q Network-** Combined reinforcement learning and deep learning techniques to teach the agent to navigate in the grid-world environment.

TECHNICAL SKILLS

- Programming Languages - Java, Scala, Python, Perl, C++, Javascript, PHP, R
- Database - DB2, Greenplum, Oracle, MySQL
- Frameworks and Tools - Keras, Tensorflow, Spring Framework, Spring Integration, Spring Boot, Hibernate, Junit, Restful Webservices, AngularJS, Ext JS, GraphQL, Pandas, Numpy, OpenCV
- Big Data Stack - Hadoop, Apache Spark, Hive, Impala, Docker, AWS
- Operating System - Linux, Windows, Android

PROFESSIONAL ACCOMPLISHMENTS

- Awarded with Best Debutante of the year 2015 award, Client Focused Delivery award for Q1 2016 and Core Value Relationships award for Q1 2017.
- Awarded with "**Star of the Quarter**" by Morgan Stanley RiskTech team for continuous 2 quarters.