Anunay Rao

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EDUCATION

University at Buffalo: *Buffalo, NY* **Graduation Date:** *February 2020*
M.S in Computer Science **GPA**: 3.7
Relevant Coursework: Data Structures · Algorithms (Sequential and Parallel) · Machine Learning · Distributed Systems · Computer Vision and Image Processing · Data Intensive Computing · Data Models Query Language · Deep Learning · Database Systems

TECHNICAL SKILLS

- Programming Languages: Python, Java, R, HTML CSS, React JS, SQL
- Libraries: Python: Tensorflow, Keras, Scikit-learn, Numpy, Pandas, Matplotlib, SciPy, Seaborn, Plotly, Cufflinks, NLTK
- Frameworks: Django REST Framework, React, Material-UI, Jupyter, Android Studio, Git, Tableau, Google Colaboratory, PyCharm, Visual Studio Code

PROFESSIONAL WORK EXPERIENCE

SPATCHED – Delivery and Logistic Solutions *May 2020 – Present*
Software Engineer : Buffalo, NY

- Developed web app using React and Django focussing on improving the efficiency of deliveries.
- Designed REST API using Django REST Framework.
- Created dashboard summarizing data for internal reports or communications with partners.
- Used Git version control to maintain the codebase.
- Used Swagger-UI for the documentation of the REST API.

PROGRAMMING PROJECTS - https://anunayrao.github.io/

Unpaired Image-to-Image Translation *November 2019*
Technologies: Python, Tensorflow, Keras,

- Image-to-Image translation using cycle-consistent generative adversarial network (CycleGAN).
- To achieve the task of object transfiguration, style transfer, converting photos to paintings, generating images with shallower depth of field and season transfer.

Relational Query Engine *February 2019 - May 2019*
Technologies: Java, SQL, Git, Yourkit Java Profiler

- SQL query evaluator with support for Select, Nested-Select, Project, Join, Bag Union, Aggregate functions (COUNT, MIN, MAX, AVG, SUM), GROUP BY and ORDER BY clause on Big Data (TPC-H).
- Implemented external sorting to perform order by clause on big data.
- Optimised the query evaluation technique by implementing selection pushdown and indexing on primary as well as secondary keys to reduce query processing time.
- Optimised the engine to comply with rigorous memory and efficiency requirements and was tested against the queries of TPC-H Benchmark.

Simplified Amazon Dynamo *May 2019*
Technologies: Java, Socket Programming, Threading, Android Studio, Distributed Systems

- Dynamo style key-value storage implementing partitioning, replication, and failure handling to provide per-key linearizability (most recent write using Quorum approach) and availability even under failures.
- System supports concurrent read/write operations and failed node recovery.
- AVD instances are used to act as nodes forming dynamo ring and their content providers to implement storage functionalities.

Sentiment Analysis using Hadoop Map Reduce *April 2019*
Technologies: Python, Tableau, HDFS, MapReduce

- Big Data pipeline to perform data cleaning and then running Map Reduce algorithms to calculate word count and word co-occurrence.
- Data collected on the topic of sports from Twitter REST API, New York Times API and Common Crawl.
- Performed visualization using word cloud in Tableau and published results on Tableau server.