Anunay Rao

+1 716 536 0335 | 154 Merrimac Street, Buffalo, NY 14214
anunayra@buffalo.edu | https://www.linkedin.com/in/anunayrao/ | https://github.com/anunayrao/

EDUCATION

University at Buffalo, The State University of New York **Expected: December 2019**
Master of Science in Computer Science GPA: 3.75/4.0
Introduction to Machine Learning, Computer Vision and Image Processing (CVIP), Statistical Data Mining, Algorithms (Sequential and Parallel), Database Systems, Distributed Systems, Data Intensive Computing

Shri. G.S Institute of Technology and Science, India (R.G.P.V) **May 2018**
Bachelor of Engineering, Computer Engineering GPA: 7.39/10.0

TECHNICAL SKILLS

Languages	C, C++, Java, Python, R
Web	HTML5, CSS3, JavaScript
Databases	MySQL, SQLite
Technologies/Tools	Android Studio, RStudio, Jupyter, Git, Eclipse, Tensorflow, Keras, Tableau

PROJECTS

Relational Query Engine, *Spring 2019* **Databases Systems** (*Java, MySQL, JSQLParser)*
Developed a simple SQL query evaluator with support for Update, Insert, Delete, Select, Nested-Select, Project, Join, Bag Union, Limit, Aggregate functions (COUNT, MIN, MAX, AVG, SUM), GROUP BY, GROUP BY Aggregates and ORDER BY clause on Big Data (TPCH).

Amazon Dynamo Style Key-Value Storage, *Spring 2019* **Distributed Systems** *(Java, Android)*
Implementing Dynamo-style key-value storage implementing portioning, replication and failure handling to provide per-key linearizability and availability.

Distributed Hash Table (Chord), *Spring 2019* **Distributed Systems** *(Java, Android)*
Implemented a distributed hash-table based on Chord that provides node joins, ID space partitioning, and ring based routing.

Group Messenger, *Spring 2019* **Distributed Systems** *(Java, Android, Socket Programming)*
Developed a Group Messaging Android Application with decentralized TOTAL and FIFO message ordering guarantees.

Text Processing using Hadoop MapReduce, *Spring 2019* **Data Intensive Computing** *(Python, Tableau)*
Developed Big Data pipeline to perform Data Cleaning and then word count and word co-occurrence algorithms on the text data collected from Twitter REST API, New York Times API, and Common Crawl Data on Sports and then performed visualization in Tableau.

Exploratory Data Analysis, *Spring 2019* **Data Intensive Computing** *(R, RStudio, Jupyter)*
Analyzed Influenza outbreak by performing EDA by extracting tweets by using Twitter REST APIs and comparing the data with Official Influenza Statistics.

Hough Transform, *Fall 2018* **CVIP** *(Python)*
Implemented Hough transform in python to detect lines and circles in the image.

Multi-Scale Template Matching, *Fall 2018* **CVIP***(Python)*
Implemented template matching in Python to find the template in the given image, invariant of template size.

K-means Clustering and Color Quantization, *Fall 2018* **CVIP***(Python)*
Implemented K-means clustering in Python and then applied it to image color quantization to represent an image with specified number of colors.

Gaussian Mixture Model, *Fall 2018* **CVIP***(Python)*
Implemented GMM using Expectation Maximization Algorithm on Old Faithful Dataset.

Morphological Operators, *Fall 2018* **CVIP** *(Python)*
Implemented morphological operations, Opening, Closing, Dilation and Erosion.

Handwriting Comparison, *Fall 2018* **Machine Learning** (*Python)*
Implemented linear regression, logistic regression and Neural Network in Python on Human Observed Features Dataset and GSC Features Dataset extracted from CEDAR Letter Dataset which consists the image snippets of the word “AND”.

Reinforcement Learning and Deep Learning, *Fall 2018* **Machine Learning** (*Python)*
Implemented Deep Reinforcement Learning Algorithm – Deep Q-Network to teach the agent to navigate in the grid world environment in order to reach the goal.

Handwritten Digit Classification, *Fall 2018* **Machine Learning***(Python)*
Implemented Logistic regression, Neural Network, Random Forest and SVM on the MNIST and USPS Dataset. Further, implemented ensemble of these four classifiers using Majority Voting.