Gopichand Kommineni

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Education

Master of Science in Computer and Information Sciences, G.P.A: 3.81/4.0 *Aug2019 - May2021*

UNIVERSITY OF FLORIDA *Gainesville, FL*

Relevant Course Work: Analysis of Algorithms, Advanced Data Structures, Machine Learning, Distributed Operating System, Pattern Recognition, Math for Intelligent Systems, Statistics, Computer Networks, Software Engineering.

Bachelor of Technology in Computer Science, G.P.A: 8.9/10.0 *Jun2015 - May2019*

V R SIDDHARTHA ENGINEERING COLLEGE. *Vijayawada, India*

Skills

Programming Languages	Python, Java, SQL, C, Elixir, Octave, HTML, JavaScript, Object Oriented Programming, R.
Databases and frameworks	Oracle 11g, TensorFlow, Phoenix, Ecto.
Additional skills and interests	Machine Learning, Data Science and Analytics, Distributed Systems, Git, Statistics.
Soft Skills	Problem-Solving, Communication, Flexibility, Teamwork, Confidence, Self-Management.

Experience

Graduate Teaching Assistant. *Jan 2021 – May 2021*

UNIVERSITY **OF FLORIDA – NETWORK ANALYTICS AND MACHINE LEARNING.** *Gainesville, FL*

- Assisted my professor in designing a contact tracing experiment based on live data of 2 million log records of WAP on campus.
- Mentored and assisted 29 students in their course work.

Research Assistant *May 2020 – Dec 2020*

UNIVERSITY **OF FLORIDA –ML ALGORITHMS FOR TRAFFIC INTERRUPTION DETECTION** *Gainesville, FL*

- Working on Traffic Signal timing predictions and Incident Detection under my Professor Dr. Sanjay Ranka funded by NSF.
- Clustered Real time traffic flow rate of different times of a day for 6 months using Spectral and K-means clustering.
- Designed an Algorithm for Signal to Phase Mapping for 200 Signals in intersections.
- Generated about 1 Million simulations of traffic flows each simulation containing 3 hours of flow data.

Projects

File Transfer using peer2peer BitTorrent Simulator – Java. *Dec2020*

- Implemented Chocking and Unchocking mechanisms of BitTorrent protocol.
- Automated Peer Initialization and file sharing.

EDA and Predictions on H1-B data —*Python.* *Apr2020*

- Performed Exploratory Data Analysis and Feature Engineering over 2.5 million records in H1-B Data indexed from DOL.
- Applied various algorithms for predicting the output of petitions by clustering 1-dimensional non categorical data.

Database System Implementation – C++. *Nov2019*

- Implemented a single user Database that supports subset of SQL features like select, aggregate and join.
- System can handle 1 million records and perform all the operations on that scale.

Scalable Peer to Peer Network using Tapestry Algorithm. *Dec2019*

- Achieved scalability by Implemented the network joining and removing bottle necks.
- Constructed a 40X16 DHT for each node and Reduced average ping round time to 15ms for 10000 nodes.

Fault-tolerant Distributed system using Gossip Protocol. *Sep2019*

- Constructed various topologies for at least 10,000 nodes in the network.
- Implemented PushSum and Gossip algorithm for 6 different Topologies and calculated Time of Convergence.

Photorealistic image synthesis from text descriptions – *Python, TensorFlow.* *Aug2018-May2019*

- Developed an algorithm for encoding 8120 images and corresponding descriptions to vectors for creating the dataset.
- Reduced the training period for 300 epochs by 1 day by training the model on cloud VM instance.

Leadership and Achievements

- Runner-up among 40 teams in Smart City Hackathon on real-time IoT solutions.
- Selected as one of the 100 Finalists among 800 participants in the Deep Learning Hackathon conducted by AWS.
- Voted as the main Coordinator for organizing and coordinating branch events in my college Annual festival AFOSEC'18.
- Served as the Program Coordinator for 6 months in an innovation and coding club with 320 CS students.