Viraj Mavani

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EDUCATION

The University of Texas at Dallas**,** Richardson, USA   May, 2020
Master of Science, Computer Science (Jonsson School Merit Scholar; Prodigy Finance Graduate Scholar)   **CGPA: 3.78 / 4.0**

L.D. College of Engineering, Ahmedabad, India   June, 2018
Bachelor of Engineering, Electronics and Communication Engineering   **CGPA: 8.9 / 10.0**

SKILLS

Languages and Frameworks	: Python, Java, JavaScript, PHP, React, C++, C, Git, R, Spark
Web Technologies	: HTML5, CSS, XML, Bootstrap, ReactJS, Flask, Django, NodeJS, ExpressJS
Operating Systems	: Linux (Ubuntu, CentOS), Unix, Windows, Mac OS
Databases	: MySQL, Cassandra, Microsoft SQL Server, Oracle DB, MongoDB
Others	: Android, RESTful APIs, Docker, Jenkins, PyTorch, Scikit-learn, Agile

WORK EXPERIENCE

Software Engineer II, Sam's Club Tech   June, 2020 – Present
- Successfully delivered a feature health-checking library built over PySpark for machine learning applications.
- Working on Sam's Club Fraud Detection API using ensemble machine learning algorithms (XGBoost) over distributed datastores.
- Skills Utilized: **Python, PySpark, XGBoost, Flask, Cassandra, Databricks, Azure Cloud**.

Software Engineer Intern, 7-Eleven Inc   May, 2019 – August, 2019
- Successfully delivered a **trend decomposition** system using Facebook Prophet to production with **5.36% mean error**.
- Deployed a React.js web dashboard for viewing the results with backend scripting in Node.js.
- Skills Utilized: **Python, Spark, Facebook Prophet, Databricks, React.js, Node.js**.

Research Assistant, The University of Texas at Dallas   September, 2018 – May, 2019
- Designed and developed a deep learning classifier for loop-closure detection for Visual SLAM in an autonomous vehicle setting.
- Ideated and implemented a new system to make datasets hosted on web servers and a **REST API** to access them while training thus enabling dataset modifications after release.
- Skills Utilized: **Python, urllib**.

Research Intern, Indian Institute of Technology (IIT), Gandhinagar   May, 2017 – June, 2018
- Conducted research on impacts of cognitive data on facial expression recognition by deep learning classifiers. Resulted in publications at **ICCV**, **CVPR**.
- Skills Utilized: **Python, PyTorch, NVIDIA DIGITS**.

PROJECTS

- **Online Book Store – E-Commerce Website**   Web Programming Languages - September, 2019
  An online e-commerce bookstore with HTTPS authentication created using **React, Next.js** and backend in **Node.js, MongoDB.**
- **Travel Photo Gallery**   Web Programming Languages - August, 2019
  A website for posting travel photos with interactive UI built using **HTML5**, **CSS3** and **jQuery**.
- **Decision Tree and Ensemble Methods Implementations**   Machine Learning - February, 2019
  ID3 implementation along with bagging and AdaBoost modules. Built using **Python** and **NumPy**.
- **Davisbase SQL Engine**   Database Design - February, 2019
  A complete SQL RDBMS engine written in **C++** with B+ tree file indexing.
- **Anno-Mage: A Semi-Automatic Image Annotation Tool**   Personal Project - June, 2018
  A semi-automatic image annotation tool made as a desktop application in **Python** and **Tkinter** with overwhelming response on GitHub from a user base of **over 300 users**.

LEADERSHIP & ORGANIZATIONS

- UTDesign – Project Mentor   September, 2018 - Present
- IEEE Student Branch, L.D. College of Engineering – Student Branch Chair   April, 2017 – April, 2018

PUBLICATIONS

"Facial Expression Recognition using Visual Saliency and Deep Learning". In Proceedings of International Conference on Computer Vision (ICCV), 2017