

Viraj Mavani

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EDUCATION

The University of Texas at Dallas, Richardson, USA

Master of Science, Computer Science (Jonsson School Merit Scholar; Prodigy Finance Graduate Scholar)

May, 2020

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, Microsoft Azure, AWS, Docker, Jenkins, PyTorch, Scikit-learn, Agile

WORK EXPERIENCE

Software Engineer II, Sam's Club Tech

May, 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