Viraj Mavani

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EDUCATION

The University of Texas at Dallas, Richardson, USA — Expected May, 2020
Master of Science, Computer Science (Jonsson School Merit Scholar; Prodigy Finance Graduate Scholar) — **CGPA: 3.9 / 4.0**

Coursework: Data Structures and Algorithms, Machine Learning, Web Programming Languages, Natural Language Processing, Computer Vision

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, C++, C, Git, R, Spark
Web Technologies	: HTML5, CSS, XML, Bootstrap, AngularJS, NodeJS, ExpressJS, MongoDB
Databases	: MySQL, Microsoft SQL Server, Oracle DB, MS Access
Others	: RESTful APIs, OpenCV, Tensorflow, PyTorch, Scikit-learn, Agile

WORK EXPERIENCE

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, Scikit-learn, Databricks, React.js, Node.js**.

Research Assistant, The University of Texas at Dallas — September, 2018 – May, 2019

- Designed and developed an **image 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, PyTorch, 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, Tensorflow, PyTorch, NVIDIA DIGITS**.

PROJECTS

- **Smart Blogger for GitHub pages Websites** — Personal Project - December, 2019
  A **Java** Web Service which updates repositories for GitHub pages websites on REST requests from a custom designed Client application made in **React.js**.
- **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.**
- **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 – December, 2019
- 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

"SAF- BAGE: Salient Approach for Facial Soft-Biometric Classification - Age, Gender, and Facial Expression". In Proceedings of Winter Conference on Applications of Computer Vision (WACV), 2019.