Sanjana Srinivas

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Education

San Jose State University — *San Jose, CA*

MS in Computer Engineering, GPA 3.9/4.0 — *Present*

PES Institute of Technology — *Bangalore, India*

BE in Electronics and Communication, GPA 8.99/10.0 — *May 2017*

Skills

Languages Python, HTML, JavaScript, Bootstrap, CSS, Typescript, C++

Frameworks Angular, NodeJS, MongoDB, Magento, Avaamo Chatbot, Git, Docker

Coursework Machine Learning, Data Mining, Introduction to Computer Vision, Deep Learning, Data Structure / Algorithm - C++

Experience

San Jose State University — *San Jose, CA*

Research Assistant — *July 2020 - PRESENT*

- Built monocular depth estimation neural network, reproduced results from popular works like monodepth, monodepth2 and DORN on KITTI and CityScapes datasets. Technology used: ***Pytorch***
- Performed **8-bit integer quantization** of weights of depth neural network to achieve 32% memory compression and 50% improvement in runtime performance (benchmarked on Intel Core i7-6700K CPU) with negligible drop in accuracy. Technology used: ***Pytorch***
- Actively working on improving runtime performance of neural networks by introspecting neural network weights and activations. Implemented methods like principal filter analysis and weight pruning. Technology used: ***Pytorch***
- Submitted a report to **ML Reproducibility Challenge** on CVPR2020 paper, *Self-supervised Monocular Trained Depth Estimation using Self-attention and Discrete Disparity Volume*. Technology used: ***Pytorch***

Wipro — *Bangalore, India*

Full Stack Developer — *Aug. 2017 - Oct. 2019*

- Worked on ideation, wireframing and prototyping a solution for mobile number portability using **Blockchain** technology. Also developed and deployed the user interface for the same. Technologies used: ***Angular 6***
- Developed a POC for Ericsson. Built user interface screens for their Digital Experience Platform. Also integrated the front-end with RESTful web services. Technologies used: ***Angular Material, Angular 4***
- Worked with teams to prototype various web and mobile applications demonstrated at Mobile World Congress 2018 and 2019. Technologies used: ***Angular 4, Ionic, NodeJS***
- Deployed Avaamo **Chatbot** that provides real-time response to user queries regarding status of orders, tickets, customer details and statistics of team's progress. It was deployed internally within Wipro to improve productivity within teams. Technologies used: ***Avaamo***

Software Engineer Intern — *Feb. 2017 - Jun. 2017*

- Developed a product using MVC architecture that can be used to purchase mobile recharge plans. Technologies used: ***AngularJS, Magento***

Projects

Face Segmentation & AR Makeup

- Implemented deep neural network using Tensorflow framework to perform **semantic segmentation** of different parts of the face using CelebAMask-HQ dataset. Obtained an accuracy of **93.13%** and mIOU of **60.9%** Technologies used: ***Tensorflow, OpenCV***
- Developed end-to-end application using alpha-matting to change lip and hair color. Technologies used: ***ReactJS, NodeJS, TensorflowJS, OpenCV.js***

Grape Disease Detection and Classification

- Implemented various machine learning models - **Random Forest, SVM** and **deep neural networks** to detect and classify grape diseases.
- Implemented ensembling schemes of bagging and stacked prediction to improve performance.
- Obtained accuracy of **98.23 %** on the test set. Technologies used: ***Python, Scikit-learn, Tensorflow***

Wildfire Analysis and Prediction

- Built a dataset by scraping wildfire and corresponding temperature and precipitation data from Geospatial open data portal and National Weather Service Forecast portal for Washington State.
- Predicted the occurrence of wildfire given the temperature and precipitation details of the region using Logistic Regression model. Obtained accuracy of **84.29%**. Technologies used: ***Python, Scikit-learn, Matplotlib, t-SNE***

Awards

SJSU Davidson Scholar Award for the proposed research activities

Wipro Victory League Recognition - MWC and World IP Day Demos

Skating Ekalavya Award, ***Highest Sporting Award in the state of Karnataka, India***. ***Participated*** in World Roller Speed Skating Championships, Haining. ***Bronze medal*** in Relay, Asian Ice Skating Championships, Taiwan.