SURYA NARAYANA AV

J-303, Kaveri Apartments, Dwarka, Sector-6, New Delhi - 110075
((+91)9654261379 ⋄ surya222518@gmail.com

EDUCATION

Guru Gobind Singh Indraprastha University, New Delhi *August 2016 - November 2020*
Bachelor of Technology and Engineering, Electronics and Communication Engineering.
CGPA: 9.15/10 (Dept Rank 2) (Dept Rank 1 CGPA 9.21/10)
Coursework: Data Structures, C Programming, Computer Organization, Networking, Microprocessors, Digital Communication, Information Theory And Coding, Computing, Digital Signal Processing, Switching Theory and Logic Design

WORK EXPERIENCE

PepCoding August - October 2020
Teaching Assistant
- I helped undergrad students with their doubts in Data Structures and Algorithms and prepared them for their Coding Interviews.

Samsung Research and Development, Noida February - June 2020
Software Engineer Intern, STACK: Keras, Python, Pytorch *Software Engineering Innovation Department*
- I developed an automatic object removal model (Unet) using Keras for scene editing. Also compared it with classical clustering techniques using scikit-learn in python for person segmentation.

Indian Institute Of Science, Bangalore June - Aug 2019
Research Intern, STACK: Tensorflow(1.14), Python *Spectrum Lab, Electrical Engineering Department*
- Developed a Convolutional Autoencoder using various forms of symmetric filters in **core Tensorflow(1.14)** for denoising noisy images for which we used **UC Berkeley Segmentation Data Set** which showed that symmetric filters start performing better than asymmetric filters at denoising images containing high noise levels.
- Found a hypothesis from wavelet theory that symmetric filters should perform better at image denoising and later proved mathematically, verified by testing it with many noisy images and wrote a research report.

Indian Institute Of Technology, Hyderabad June - Aug 2018
Research Intern, STACK: Matlab, Jetson Tx2 Dev Kit, LM35 sensor, ESP8266 microchip *Wi-Net Lab, Electrical Engineering Department*
- Performed Curve Fitting on daily temperature data based On Newton's Law Of Cooling. Performed regression analysis on its parameters using Matlab to predict suitable On times for Hvac's for efficiently using energy.
- Performed Data Analysis, Data collection by deploying sensors, occupancy estimation by deploying a real time object Detection Model on Nvidia's Jetson Tx2. Got to learn applied Machine Learning.

TECHNICAL STRENGTHS

Languages: C, C++, Python, Javascript, Matlab
Frameworks: Pytorch, Tensorflow, Keras, OpenCV, MySQL, Nodejs, Mongodb, Express, HTML, CSS, Scikit-Learn

ACADEMIC PROJECTS

Diabetic Retinopathy Detection STACK: Scikit-Learn, Python, OpenCV, Numpy, Pandas, Matplotlib, Scipy
- Predicted the scale of seriousness(1-5) of the disease with the help of retinal images dataset (Kaggle). Achieved Dimentionality Reduction by performing data analysis which we also applied to **e-optha** dataset where we obtained 97 percent accuracy on binary classfication. Implemented and Compared various machine learning models with hyperparameter tuning in **python** where we achieved 70 percent accuracy with Random Forest Algorithm despite high data imbalance.

Parkinson Disease Detection STACK: Scikit-Learn, Python, Numpy, Pandas, Matplotlib
- Performed statistical analysis to predict Parkinson's Disease from features extracted from voice signals(Kaggle). Implemented and compared various machine learning algorithms of which Random Forest algorithm along with hyperparameter tuning gave an accuracy of 90 percent on a true positive case.

HONOURS AND ACHIEVEMENTS

- Institute Academic Excellence Award for Department Rank 1 (Sophomore Year)
- Institute Academic Excellence Award for Department Rank 2 (Junior Year)
- Summer Research Fellowship 2019, Indian Academy of Sciences
- Summer Research Fellowship 2018, Indian Academy of Sciences