

EDUCATION

- **Maharaja Surajmal Institute of Technology** New Delhi, India
Bachelor of Technology in Electronics and Communication Engineering; GPA: (9.15/10.0) *Aug. 2016 – Nov. 2020*

EXPERIENCE

- **Indraprastha Institute of Information Technology** New Delhi
Research Assistant *Jan 2021 - March 2021*
 - **Virtual endoscopy:** AI based volumetric exploration of CT/MRI medical images where I performed segmentation on visible human dataset for cryo images using Slicer3D and rendered images using inviwo.
- **Samsung Research and Development** New Delhi
Software Engineer *Feb 2020 - Jun 2020*
 - **Automatic Object Removal:** Autoencoder 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
Research Intern *Summer 2019*
 - **Image Denoising using Deep Learning:** 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.
 - **Signal Processing Mathematics:** 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
Research Intern *Summer 2018*
 - **Data Collection and analysis :** Performed Data Analysis, Data collection by deploying sensors, occupancy estimation by deploying a real time object Detection Model on Nvidia's Jetson Tx2.
 - **Machine Learning using Matlab:** 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.

PROJECTS

- **Tedium:** CRUD functionality - Build using NodeJs + MongoDB + Express, Robo3T, Bootstrap for personal blogging.
- **Bearbnb - Your Ultimate Holiday Destination:** CRUD functionality - Frontend UI build using ReactJS + Firebase.
- **Diabetic Retinopathy Detection:** Predicted the scale of seriousness(1-5) of the patient with the help of retinal/fundus images using Machine Learning in Python and achieved 70 percent accuracy with Random Forest Algorithm despite high data imbalance.

PROGRAMMING SKILLS

- **Languages:** Javascript, C++, Python, Java, C, Matlab
- **Technologies:** ReactJS, MongoDB, Express, NodeJS, HTML, CSS, Bootstrap, Pytorch, Tensorflow, Keras, OpenCV, MySQL, Slicer3D, Matlab

HONORS

- **Summer Research Fellowship Awardee 2018 and 2019:** Indian Academy of Sciences (est. 1934 by Sir C.V.Raman)
- **Academic Excellence Award:** Department Rank 1 and Rank 2 in 2018 and 2019 respectively.