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V B Vineeth Reddy

Education

2014–Present **Bachelor of Technology (B.Tech.) in Computer Science and Engineering**.
National Institute of Technology - Karnataka (NITK), Surathkal. **CGPA: 8.67/10**.
Graduation May 2018.

2012–2014 **Pre University (P.U.)**.
Vijaya Ratna Junior College, Hyderabad, Telangana.
Score: 976 / 1000 (97.6%) (Centum in Physics, Mathematics)

2012 **Indian Certificate of Secondary Education**.
Kotak Salesian School, Chinna Waltair, Visakhapatnam, Andhra Pradesh.
Score: 655 / 700 (93.57%) (Topper of the school, Centum in Mathematics)

Research Projects

Undergraduate Thesis - Denoising Optical coherence tomography (OCT) images* .
Currently Working on implementing an auto-encoder model to denoise OCT images corrupted with speckle noise. Built a gated CNN model with skip connections to transfer more information from conv to corresponding deconv layer. After using the data generated from GANs, the results obtained are better than the state-of the art papers.
(*Planning to publish the paper by March in ICMC MICA 2018*)

Tyre Pressure Classifier.
Implemented a classifier to decide whether the tyre has to be filled with air or not. After collecting the dataset of the vehicles from nearby gas stations, results obtained after using Random Forest and Neural Network Classifier were compared.
(*Paper submitted to the International Conference on Advanced Computing, Networking, and Informatics, 2018*)

Work Experience

2017 **Summer Intern**, *Samsung Research Institute Bangalore (SRIB)*, Bangalore.
Interned in the Vision and Aygmented Reality (AR) divison. The work that I have accomplished here :
- Built a Visual Place Recognition (VPR) Model to locate previously visited places using Bag of Words (BoW) approach. Tools used are *C++, OpenCV, Java, Android Studio*.
- Implemented a novel covisbility mapping technique to take previous locations into consideration, where every new query image is tried to map to a particular virtual location.
- Integrated this model into an android app which provides real-time indoor navigation.

2016 **Summer Intern**, *Defence Research and Development Organization (DRDO)*, Hyderabad.
Internship work in the Advanced Systems Laboratory (ASL) included :
- Designed the website for the IT team of the ASL divison using *HTML, CSS, JavaScript*.
- Integrated the site with Lightweight Directory Access Protocol (LDAP) enabling all the employees to access the data from remote locations.

2015 **Summer Intern**, *Hindustan Petroleum Corporation Limited*, Visakhapatnam.
- Built a module to modularize the packets received from the central server to all the clients to reduce packet drops.

Academic Projects

Image Generation using General Adversarial Networks(GANs).
Generated new images similar to MNIST dataset using Deep Convolutional Generative Adversarial Neural Networks (DCGAN). The generated images was then used to classify the combined MNIST dataset into corresponding digits.

Storm Magnitude Classifier.
Implemented KNN model to classify the magnitudes of storms based on traditional F-scale, that have taken place in the past 50 years. MLP and Random Forest Classifiers were also implemented to compare the results with KNN.

Colorify.
An application designed to aid color blind people by providing them real time information about the colors around them. Using this a person can know if he has color blindness and also know which type of color blindness. Tools used are *Android Studio, Computer Vision API - Microsoft Azure*.

Cancer Diagnosis using Automatic Mitotic Cell Detection and Segmentation in Histopathological Images.
Designed a module to detect malignant cells from histopathological images based on the number of mitotic cell divisions that take place over a period of time in unit area using *Matlab*.

Institute student council website.
Part of the team that built the college website for managing all the student council affairs. Tools used are *Django, Python, HTML, CSS*.

Web-Lock.
A chrome extension to provide an extra layer of protection to the browser. It helps prevent any kind of bot attacks on an inactive browser, by closing it after a particular inactivity time period.

Online courses

- Machine Learning by *Stanford university* via Coursera.
- Creative Applications of Deep Learning with TensorFlow by Kadenze.
- Deep Learning Specialization by *Stanford university* via Coursera.

Computer skills

Languages	C, C++, C#, PHP, Python, Java, R, HTML, CSS, JavaScript, Julia.
Tools	OpenCV, Keras, Matlab, SciPy, Android Studio, STL, Git, LaTeX, MySQL.

Leadership and Organization Skills

- As a core member of Technites Committee, organized several events for inter-college programs.
- Student Pupil Leader in class 10.

Activities and Interests

Tech Club	**Institute of Engineers (IE)**, NITK Student Branch, Executive Member.
Hobbies	Competitive Programming, Photography, Gaming, Cycling, Reading.