Nakka Chakradhar

Education

2016-2020 (expected) — **BTech, Electrical Engineering**; Indian Institute of Technology, Hyderabad

Currently pursuing third year in Bachelor of Technology and Honors in Electrical Engineering.

Current CGPA : 8.71

2014-2016 — **Intermediate Education**; FIITJEE, Hyderabad

Cumulative marks : 98.1%

2010-2014 — **Primary Education**; Little Flower High School, Hyderabad

CGPA : 9.7

Projects

Facial Recognition with OpenCV, DLib and a flavor of FaceNet

Implemented a real-time face recognition module on web-cam footage

- Achieved 98% accuracy on a custom made dataset. Also achieved live face recognition on 720p webcam feed.
- **GitHub repo**

Gait recognition with Keras

Implemented a gait-recognition deep-net by cascading two networks - HumanPoseNN and GaitNN.

- Achieved an accuracy of 92.8%
- **GitHub repo**

Lung Tumor Segmentation

Worked on segmentation of lung tumors on DICOM images as a part of IEEE VIP-CUP problem statement (VIP-CUP 2018).

Inter IIT Tech Meet 2017

Worked on ‘Soldier Support’, a problem statement offered by DRDO. 7th position among all IITs.

- Gesture Recognition: Made a functional gesture recognition module attached to a glove, capable of capturing any hand movement in 3-D space.
  - The module could guess 39 out of 43 gestures specified by DRDO, with probability 1.
- AD-HOC Localization: Implemented localization of Raspberry PIs in an ad-hoc network to locate and pinpoint any device in the network.
  - The module was capable of tracking nodes in a radius of 100m in closed room environment and around 200m in outdoor environment.

Smart Meter

Made a working prototype smart energy meter capable of tracking energy consumption and relaying it to a server in real-time.

Work Experience

2018 **Summer Internship**; NemoCare (CFHE - IIT Hyderabad)

Interned as an IoT developer. Worked on a module to collect and transmit health data of infants to a single hub.

Used Arduino IDE and open-source I2C libraries.

2018 **Winter Internship**; Hexagon Capability Center

Worked on point cloud segmentation using PointNet architecture and tested the feasibility of transfer learning.

Technical Experience

Machine Learning and Deep Learning Frameworks:

- Tensorflow
- Keras
- Scikit-learn

Python Packages:

Numpy, Scipy, Pandas, Matplotlib, PIL, OpenCV

Areas of Interest:

Machine Learning and Deep Learning, Computer Vision, Image and Video processing

Related Coursework:

I've undertaken courses on Introduction to AI and ML, Representation Learning, Data Analytics, Random process, Linear Algebra, Digital Modulation Techniques, Information Theory, Digital Signal Processing, IoT and pursued mini-projects in these areas.

GitHub Repo

Achievements and CCA

- Selected for the KVPY programme and was eligible for KVPY scholarship
- Megathon 2k17 Runners-up (Hackathon conducted at IIIT Hyderabad) for our Smart Power Meter project
- Secured AIR 2015 in JEE-Advanced 2016
- Co-ordinator for Elektronica - the Electronics Club of IIT Hyderabad
- Worked as Teaching Assistant under Dr. Sushmee Badhulika ()

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