# 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](https://github.com/chakri1804/Face-Gait_recognition)

**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](https://github.com/chakri1804/Face-Gait_recognition)

**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](https://github.com/chakri1804)

## 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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