


# AAYUSH GOYAL

C-323 , IIT Hyderabad, Kandi, Sangareddy, Telangana, India, 502285

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## EDUCATION

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**Indian Institute of Technology, Hyderabad**

*Bachelor of Technology - Electrical Engineering*

*July 2018 - Present*

Present CGPA - 8.4/10

**Related Coursework :** AI & ML, Algorithms, Statistical Learning, Internet Of Things, Drones, Digital Signal Processing, Probability & Stochastic Processes, Linear Algebra, Digital Modulation, Digital Design, Communication Theory, Electronic Devices, Analog Electronics, MOS Transistors,

**Mount Carmel School Dwarka, New Delhi**

*Higher Secondary School*

*April 2016 - May 2018*

Overall Percentage: 93.60

**Mount Carmel School Dwarka, New Delhi**

*Secondary School*

*April 2016*

Overall CGPS: 10

## RESEARCH PROJECTS

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**Estimating network performance using GNN**

*Under Dr Sai Dhiraj Amuru (Department of EE, IITH)*

July 2020 - Present

- Working on a GNN algorithm that estimates the resulting per-source-destination mean per-packet delay given a network topology and its configuration.
- Working for submission to **GNNet Challenge 2020 in ITU AI/ML in 5G Challenge**.

**Wireless User Localization**

*Under Dr Sai Dhiraj Amuru (Department of EE, IITH)*

February 2020 - Present

- Working on a **Self-Supervised Learning** algorithm that can determine the position of a user, based on estimated channel frequency responses between the user and an antenna. array.
- Working for submission to **IEEE CTW 2020 Data Competition & EE Independent Project in 4<sup>th</sup> Semester**.

## WORK EXPERIENCE

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**REPAYR, Hyderabad**

*Development Intern*

September 2019 - November 2019

- Worked on development of **Repayr android applications** for this startup. This app provides the convenience of booking vehicle repair/service from anywhere by assigning it to the nearest vendor/mechanic. This follows an easy step process with options to track your repair service

## TECHNICAL STRENGTHS

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**Software & Tools**

Pytorch, Keras, Vim, L<sup>A</sup>T<sub>E</sub>X, Android Studio, Matlab, Git

**Programming Languages**

Python, C/C++, Java

**Interests**

Computer Vision, Graph Networks, Wireless Communication

**Additional Coursework**

Machine Learning by Andrew NG

Algorithms by Princeton University

## PROJECTS

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### **Independent Projects** (*For Self Learning*)

- Implemented various CNN, GAN & RNN models using Pytorch and Tensorflow
- Worked on image captioning on Flickr 8K dataset
- Designed a physical activity monitoring device assisted with an android app
- Implemented various ML algorithms on Regression, Classification, Clustering, Reinforcement, Associated Rules, etc from scratch.
- Designed a device that tracks the timer of a washing machine and displays it in an android application (**1<sup>st</sup> Semester Independent Project**).
- Designed a GPS controlled quad-copter (Drone)

### **Car Damage Detection** (*May 2020*)

**Aim :** Implemented a deep learning algorithm(YOLO based) that detects dents and scratches on exterior of a vehicle. Compressed existing networks to make it suitable to be run on any standard smartphone saving the expenses of a dedicated server.

### **IITH Dashboard** (*May 2019*)

**Aim :** Designing a **one stop destination for IITH Students**. The app displays Mess Menu, Bus Schedule, send lecture reminders and matches people for cab sharing.

This app is being actively used by 1500+ users at IITH. This was done under Lambda Club, IITH

## ACHIEVEMENTS

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- Achieved All India Rank 1872 among 2 Lakh shortlisted candidates in JEE Advanced Examination conducted by JAB.
- Achieved All India Rank 1913 among 12 Lakh candidates in JEE Mains Examination conducted by CBSE.