

# Sanchit Tanwar

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Thapar university, Patiala, India

## EDUCATION

### Thapar Institute of Engineering and Technology

Bachelor of Engineering Electronics and Communication; CGPA: 8.07/10

Patiala, India

Expected May 2020

### DAV Public School

High School; Percentage: 90.2

Panipat, India

2015-2016

### Birla Public School

Secondary School; CGPA: 9.4

Pilani, India

2013-2014

## SKILLS

- **Languages:** Python, C++, Matlab
- **Technologies:** Deep Learning, Deep Reinforcement Learning(DQN, DDQN, A3C), Arduino, Raspberry pi, Latex, ARM, AVR
- **Libraries:** PyTorch, TensorFlow, Keras, Scikit-Learn, Numpy, Pandas, Spark, Jupyter, OpenCV, PIL, Librosa, NLTK

## PROJECTS

- **Engagement Detection:** Research project to detect engagement level of students during MOOC using deep learning.(Ongoing)
  - Implementing various algorithms of video classification such as CRNN , c3d, t3d on Daisee and emotiw Dataset.
- **Artificial eyes:** Device for blinds that uses CNN and LSTM to generate caption(Show, attend and tell) and converts the captions to speech of desired language and get output on raspberry pi.
- **Self Driving Car:** Self driving car using simulation tools.
  - Lane finding in road images, traffic sign classifier.(Implemented)
  - Steering angle prediction from driving video dataset.(Implemented)
  - Vehicle detection and Segmentation using YOLO and ESNET. (Ongoing)
- **CrimeDetection:** Detecting crimes from CCTV footage in real-time using UCF crime dataset and slow-fast neural networks for video classification.
- **HealthCad:** Implemented some of the latest deep learning algorithms to help doctors diagnose various diseases.
  - Trained Densenet on malaria, chexpert, diabetic retinopathy dataset with class activation map generation to visualize results.
  - Conv-1d based neural network for atrial fibrillation classification using MIT-BIH dataset.
- **GAN:** Continuous project where I implement several applications of GAN's.
  - Dog like image generation using DCGAN
  - Semantic segmentation of city landscapes using pix2pix GAN.
- **PongAI:** Atari game (pong) playing AI based on DQN agent implemented using open ai gym and pytorch.
- **Music Genre Classification:** Preprocessing data by taking Mel spectrograms of audio and classifying using densenet based architecture

## ACHIEVEMENTS

- Placed top 25 % in 2 kaggle competetion of computer vision with accuracy 99.95%.
- Writer for Towards data science, The startup and Towards AI.
- Won two competitions in Elementos technical fest.
- Student Achievement Award - IETE(Institute of electronics and telecommunication engineers)
- Conducted workshop on Sensors and arduino for freshers in college.

## POSITIONS OF RESPONSIBILITY

### General Secretary

IETE (May 2018 - Present)

- Managing day to day activities of Thapar chapter of the nationwide technical society of electronics and communication. I also mentored 24 students.

### Technical Head

IETE (August 2017- May 2018)

- Managing day to day activities of Thapar chapter of the nationwide technical society of electronics and communication. I also mentored 24 students.

## INTERESTS

- **BLOGGING**
- **MUSIC**
- **BADMINTON**

## ADDITIONAL INFORMATION

- **ENTHUSIASTICALLY WORK IN TEAM**
- **ENTHUSIASTIC ABOUT IMPROVING MY SKILLS**
- **LOGICAL APPROACH**