Sanchit Tanwar

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Thapar university, Patiala, India

Education

Thapar Institute of Engineering and Technology — Patiala, India
Bachelor of Engineering Electronics & Communication; CGPA: 8.07/10 — *Expected May 2020*

DAV Public School — Panipat, India
High School; Percentage: 90.2% — *2015-2016*

Birla Public School — Pilani, India
Secondary School; CGPA: 9.4/10 — *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, 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.
- **CrimeDetection**: Detecting crimes from CCTV footage using UCF crime dataset using MIL ranking algorithm and slow-fast networks for feature extraction. This project was done as a freelance work for a mexican company Redinmex contact
- **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)
- **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 segmantation 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 competetions of computer vision with accuracy 99.95%.
- Received 5000$ research credits from google cloud.
- 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)*

- Arranged workshops on several topics such as Arduino and its peripherals. Volunteered to mentor 15 students in their freshman year.

Interests

- Blogging
- Music
- Badminton

Additional Information

- A team player as well as an adept independent worker.
- Enthusiastic about improving my skills
- Logical Approach