RISHABH TANWAR

B.Tech. Electrical Engineering
UG(IV Year I Semester)
Contact No: 7830989369
Email: rtanwar@ee.iitr.ac.in
Registration No: B.Tech./EE/16115095/2020

Indian Institute of
Technology
Roorkee

Area of Interest

Competitive Programming, Android App Development, Algorithms, Machine-Learning and Deep Learning

Education

Year	Degree/Examination	Institution/Board	CGPA/Percentage
2019	B.Tech. 3rd Year	Indian Institute of Technology, Roorkee	*8.644*
2015	Twelfth	S.V.M. Chamiyala, Tehri Garhwal (Uttarakhand Board)	*85.8 %*
2013	Tenth	S.V.M. Chamiyala, Tehri Garhwal (Uttarakhand Board)	*88.83 %*

Internships

Perceptual losses for real time Image Super Resolution | Samsung Noida   13 May 2019 - 12 July 2019
- This is a deep learning based project which is mainly focused upon converting a low resolution image into higher resolution image. The whole work has been done in fastai python library which sits upon top of pytorch. **Fastai** is currently a very popular python framework which is known for fast and compact design.
- The dataset used consists of thousands of cats and dogs pictures from internet and these pictures have been crapified and turned into low resolution image as an input to our model.
- The model used for training was **resnet-34** and **VGG-16** for loss calculation.
- The whole model was trained on samsung's server. The output of the model was quite satisfactory.

Projects

Exam Automation Using NLP and Deep Learning | IIT Roorkee   26 July 2019 - Ongoing
- This project aims to build an alternative automated examination system using deep learning. Project has three main parts:-
- Question paper setting and evaluation.
- Student verification using signature (CNN model is employed to achieve that).
- User interface will be created to log into and after that the exam will be taken and evaluated.

Attendance System using Face Detection | IIT Roorkee   Jan 2018 - April 2018
- This project is focused upon developing a convenient and user-friendly software system for Biometric Attendance and Security System for institution using Face Image recognition. The model used is pretrained VGG16 which is very popular model trained upon millions of images. OpenCV library is used to input the image and preprocess it. Small dataset of face images of class students have been created and concept of transfer learning is used to train the model. The model is able to recognize and verify a person from captured image in optimum time.

Home-Automation | IIT Roorkee   Jan 2018-March 2018
- The idea of this project is to automate all home appliances and make them operable through mobile connected with the help of internet. Raspberry Pi, X-bees and arduinos were used to connect the appliances and raspberry PI was controlled through a server developed using Django.
- A useful android app was also developed to connect with the server for controlling all the devices connected to the raspberry pi.

Skills

Computer languages	C/ C++, Python
Software Packages	Matlab, Ms-Office, Dev C++, Sublime, Windows, Linux
Additional Courses Taken	Data Structure, Knowledge Management, Economics, Programming in C++, Intro to deep learning by Andrew ng, CS-110 Stanford University (Intro to Machine Learning)
Languages Known	Hindi (SRW) , English (SRW)

Positions of Responsibility & Extra Curriculars

Microsoft code.fun.do   1 - 7 Feb 2017
- Participated in 2017 code.fun.do and developed a basic android application. This was basically a video streaming app which has a collection of videos of some popular tv shows and new videos gets updated on time. It has youtube api as its media player.

NSS   2016-17
- Been a part of Swachh Bharat Abhiyaan in NSS.

References

D. K. Khatod
Associate Professor EE Department
IIT Roorkee
dheerfee@iitr.ac.in
+91-1332-285-690