909, Sec-29, Noida
https://www.linkedin.com/in/ankur-haritosh/

ANKUR HARITOSH

+91 9599764314
ankurharitosh@gmail.com
github.com/ankur248

WORK EXPERIENCE

Research Internship — **Indian Institute of Technology, Delhi** — **May – July 2019**

Professor: Dr. Tapan Kumar Gandhi (tgandhi@iitd.ac.in)

- **Publication:** Research Paper accepted at the 16th IEEE India Council International Conference (INDICON 2019).
- Objective: To create an artificial system that can mimic the visual learning of a child.
- Developed a tool to track the eye pupil movement & estimated its frequency using OpenCV, Dlib & Python.
- Created a collection of datasets with decreasing levels of blurriness using eye movement frequencies on the Dog vs Cat dataset.
- Developed an artificial system using Convolutional Neural Network(CNN) & Artificial Neural Network(ANN) in Keras and optimized its performance by 16% when trained iteratively with a decreasing level of blur using Hyperas.

Computer Vision Internship — **Emuron Technologies, New Delhi** — **Dec 2018 – Apr 2019**

Supervisor: Mousumi Dhar (mousumi.dhar@emuron.com)

- Developed a Human Gaze & Trajectory Detection system using Python, Dlib & OpenCV for usage in Coffee shop's cashier machines.
- Created an application similar to Facebook Portal using Voila-Jones Face detector, Python & OpenCV.
- Implemented a tool for detecting missing Fridge parts at Assembly Line utilizing Object Detection techniques such as Yolo algorithm in Python & OpenCV after manual annotation of a personal dataset.
- Implemented an algorithm to train a Dlib Cascade on Fridge images dataset after conversion of messy annotation from YOLO to Dlib format.
- Developed a Character/Digit Recognition system to be used in live video stream using Tesseract, Python & OpenCV.

Machine Learning Internship — **Ezops Technologies, Noida** — **May – July 2018**

Supervisor: Rajeev Jain (rajeev@ezops.com)

- Implemented a tool to parse Scanned Documents in pdf format and converting tabular data into an excel sheet using Tesseract, Python & OpenCV.

RESEARCH PROJECTS & PUBLICATIONS

A novel method to estimate Height, Weight & BMI from Face

Professor: Dr. Satish Chandra (satish.chandra@jiit.ac.in)

- **Publication:** Research paper accepted at the Twelfth International Conference on Contemporary Computing (IC3 2019).
- Created a faces dataset with 982 subjects having Height, Weight & BMI values.
- Carried out Data Preprocessing & Augmentation and Face detection using Voila-Jones face detector, Python and OpenCV.
- Developed an artificial model using CNN & ANN in Keras and achieved Mean Absolute Error(MAE) values of 3.8 for BMI, 0.074(in m) for Height (Best yet) & 13.29 (in kg) for Weight.

Automatic face aging in videos using Deep Reinforcement Learning (Ongoing)

Professor: Dr. Satish Chandra (satish.chandra@jiit.ac.in)

- Developing a system to produce aged faces of young individuals in videos in Python language utilizing Keras for Computer Vision and TF Agents for Reinforcement Learning.

Brain Tumor Segmentation

Professor: Dr. Adwitiya Sinha (adwitiya.sinha@jiit.ac.in)

- **Publication:** Research paper accepted at the Third International Conference on Recent Developments in Control, Automation & Power Engineering (RDCAPE-2019).
- Developed a two-path CNN model along with CNN cascade models in Python & Keras to tackle difficulties related to the imbalance of tumor labels in Brats 2013 dataset and achieved Dice score of 0.95.

EDUCATION

Sec-62, Noida — **Jaypee Institute of Information Technology** — **July 2016 – June 2020**

- Bachelor of Technology in Computer Science and Engineering, CGPA: 7.7/10

LANGUAGES, TECHNOLOGIES, CERTIFICATIONS AND BOOKS

- Languages: C++, Python, SQL
- Interests: Computer Vision, Deep Learning, Machine Learning
- Libraries: OpenCV, Dlib, Keras, Numpy, TensorFlow, Pandas, Matplotlib, Sklearn
- O.S.: Ubuntu, Windows
- DeepLearning.ai, Machine Learning by Stanford University, Machine Learning by Sentdex, 'Deep Learning for Computer Vision with Python' by Adrian Rosebrock, 'Make Your Own Neural Network' by Tariq Rashid, Reinforcement Learning lectures by DeepMind.

Extra-Curricular

- Secured 3/100 and 4/100 ranks in 5km marathons.
- Volunteer Teacher at Light de Literacy & Blood Donor at Noida Charitable Blood Bank
- Participated in 8 Model United Nation Conferences
- Awarded Gold Medal for being a Scholar for 6 consecutive years
- Improved health by reducing my weight from 97kgs to 64kgs
- Languages : English(Native), Hindi(Native), French(Beginner)