Pintu Kumar Yadav

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Education :

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech	Indian Institute of Technology Varanasi	8.39	2018-Present
Senior secondary	BSEB board	68.2	2017
Secondary	CBSE board	10	2015

Technical skills

- **Computer languages :** C, C++, Python
- **Web technologies :** HTML, CSS, Angular, Nodejs.
- **Software and Tools :** Pandas, Keras, Opencv, ROS, Mavros.
- **Hardware :** Jetson Nano, Arduino.
- **Artificial Intelligence :** Machine Learning, Computer Vision, Deep Learning.

Internship/training :

- **Summer Intern at RRC(Robotics Research Center), IIIT Hyderabad.**

  Octomap based UAV Navigation of a Quadrotor in a Simulated Urban Environment
  - Implement real time obstacle avoidance using avoidance package by getting cloud point.
  - Generate a octomap of urban environment using octomap mapping package.
  - Implemented ROS using Mavlink protocol to control the navigation of drone in gazebo world environment

Projects :

- **Autonomous unmanned aerial vehicle fleet** *Nov 2019 – Dec 2019*

  Inter IIT Tech Meet

  Implemented ROS using Mavlink protocol, pretrained model named Mobilenet SSD V1 and message broker to control the navigation of the drones using coordinates, target detection and used to do offboard computing on the images obtained from the drones respectively.

- **Human Activity Recognition with OpenCV and Deep Learning** *Oct 2020 - Present*

  Project aim was to Training and monitoring a new employee to correctly perform a task , Verifying that a food service worker has washed their hands after handling food that could cause cross-contamination. I extend ResNet, which typically uses 2D kernels, to instead leverage 3D kernels, enabling us to include a spatiotemporal component used for activity recognition.

- **Speech Emotion Recognition** *Nov 2020 – Present*

  Currently working on an experimental Speech Emotion Recognition (SER) project to explore its potential. I will use Convolutional Neural Network to recognize emotion from the audio recording and will explore other possibilities.

- **Classification of X-ray image(COVID or Normal)** *April 2020 - April 2020*

  Developed a CNN model of 90% accuracy to classify whether a person has COVID-19 or Not based on his/her X-ray image.

- **Custom Object Detection Model with YOLO** *Oct 2020 - Oct 2020*

  Trained a custom model detector to detect all type of object which any could imagine in real time using a pre-trained **YOLO**(You Only Look Once).

- **Drowsy Driver Detection** *March 2020 - April 2020*

  Face detection and prediction is implemented with opencv to generate an alarm whenever driver feels drowsy.

- **Hand Gesture Controlled Mouse Cursor** *Feb 2020 – Mar 2020*
  Worked on vision based gesture recognition and tracking with histogram model, back-projection and mouse interfacing using pyautogui.

- **Movie Recommender System** *Dec 2019 – Jan 2020*
  International Business Machine Corporation, New York
  Based on my Coursera course assignment, built a content based and collaborative filtering recommender system on data from IBM object storage.

- **Machine-Learning Prediction Model for Slope Deformation** *Aug 2019 - Nov 2019*
  Worked under *Dr. A K Verma* to develop a prediction model to predict the slope deformation based *GB-SAR* field data.Implemented different Machine Learning algorithm to develop a prediction model.

Certified Courses :

- Neural Networks and Deep Learning
- Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization
- Structuring Machine Learning Projects
- Convolutional Neural Networks

** All these courses are Issued by Coursera*

Positions of Responsibility

- **Event Executive,** Technex 2020 (Annual Techno-management fest of IIT BHU).
- **Co-coordinator,** (AirShow)Technex 2019.
- **Mentor ,** Aero-Modelling Club IIT Varanasi.
  - Headed and managed a group of 20 students in completing their different projects successfully.

Achievements

- Participated in Inter IIT Tech Meet 8.0 representing D.R.D.O SASE'S UAV Fleet(IIT-BHU).
- Won gold badges with a 5 star rating in algorithm problem solving category in hackerrank.
- Participated in Recognizance, the Machine Learning event of Prastuti'20(Departmental Fest of Electrical).
- Participated in MLware, the Machine Learning event of Technex'20 at IIT(BHU).
- Participated in Boeing, the Aeromodelling competition of Techfest'18 at IIT Bombay.
- Participated in Drone-Tech event of Technex'19 at IIT(BHU).