ADITYA PANDEY

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Education

Master's in Data Science; Indiana University**,** Bloomington, Indiana *May 2023*
Relevant Courses: Machine Learning, Data Mining, Artificial Intelligence
Bachelors in Electronics and Communication; Jaypee Institute of Information Technology, India *Jun 2018*

Technical Skills

	Advance	Proficient	Basic
Programming	Python	C++	
Database	PostgreSQL		Redshift, No-SQL
Data Science	Classification, Regression, Regularization, Ensemble Models	Keras, TensorFlow	

Professional Experience

Algo8 AI (Junior Data Scientist) *Aug 2020 – Jul 2021*
- **Custom Object Detection:** *(Python, OpenCV, AWS)*
  - Accumulated data and performed custom object detection model (YOLOv4) using transfer learning in OpenCV
  - Detected safety helmets in the factory space to flag out workers who were not wearing safety helmets.
  - Successfully analyzed live streaming video data and achieved mAP of 91%
- **Fabric Defect Detection:** *(Python, OpenCV, AWS)*
  - Gathered data and classified fabric defect detection on a running fabric with a speed of 2 meters/second.
  - Performed pixel ratio algorithm, Gabor filter on live streaming data to classify the defects.
  - Algorithm successfully classified 72% of the defects

Vogo Automotive Pvt. Ltd. (Data Analyst) *Jun 2018 – Jul 2020*
- **IoT device health prediction**: *(Python, PostgreSQL, Metabase, Jenkins, AWS)*
  - Analyzed and designed a model which predicted the IoT device's health using features such as GPS reading, Battery level indicator, fuel reading, pulse reading and incorporate them into random forest model and other models.
  - Random forest successfully achieved the accuracy of 78%
- **Demand Forecasting:** *(Python, PostgreSQL, Metabase, Jenkins, AWS)*
  - Predicted the demand forecasting of scooters at each station for every hour to increase the usability of the scooter which is directly proportional to the revenue of the company.
  - Achieved the R^2 score of 0.67
- **Data Analysis:** *(Python, PostgreSQL, Redshift, No-SQL, Metabase, AWS)*
  - Analyzed the nearest stations to help fleet executives for finding the closest stations while filling fuel to the scooters using K-Means Clustering
  - Built Customer/Product experience dashboards for business metrics which helps in making data-driven decisions

Research Experience and Independent Projects

Utility Patent (Intellectual Property India) *Date of Filing: 1st Sep 2020*
Name: Method, System, and Apparatus for a Helmet Detection in Under Seat Storage Compartment of a Vehicle
Application Number: *202041037674*
Author Name: *Aditya Pandey, Abhimanyu Goyal, Harshit Vaishya*
Description: Designed IoT System and modeling pipeline for dealing with radio frequency signal, in addition to a system for detecting helmet theft.

Mercedes-Benz Greener Manufacturer (Kaggle Project)
Objective: Reduce the time a Mercedes-Benz spends on the test bench. Predict the time it takes to pass the testbench.
Description: Used a Stacked ensemble model to solve this problem. Evaluate the model using the R^2 Score. Got into the top 5% on Kaggle Private Leaderboard. Work is published on Analytics Vidhya (Data Science Community).
URL: https://medium.com/analytics-vidhya/mercedes-benz-greener-manufacturing-74a932ae0693

Leadership Activities and Awards

- Founder of Jaypee Developers Team at Jaypee Institute of Information Technology
- Manager at Microcontroller based System and Robotics Hub at Jaypee Institute of Information Technology
- Received the Certificate of Appreciation from CTO and CEO of Vogo Automotive Pvt. Ltd. in 2019