Rishabh Srivastava

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Github

Education

- **Indian Institute of Information Technology Kottayam** — Kerala, India
  Bachelor of Technology - Electronics and Communication Engineering; GPA: 8.50 — *July 2020 - June 2024*

Skills Summary

- **Languages**: Python, C++, C, SQL, JavaScript, HTML, CSS
- **Frameworks**: Tensorflow, Scikit, Keras, scikit-learn, LightGBM
- **Platforms**: Linux, Web, Windows, Jetson Nano, Arduino, Raspberry, AWS, GCP
- **Soft Skills**: Problem-Solving, Teamwork, Leadership, Soft-spoken, Adaptability

Publications

- **Advanced Driver Assistance System (Machine Learning, NVIDIA's Jetson Nano)**: Paper titled **"Advanced Driver Assistance System"** got published in 10th IEEE Region-10 Humanitarian Technology Conference (R-10-HTC),Hyderabad,September 2022.
- **Portable Traffic Sign Recognition System and Road Lane Detection (Deep Learning, Tensorflow, Keras)**: 1 Conference paper and 1 Journal in progress in which we developed a Traffic Sign Recognition Model using CNN with 99.45 % accuracy which was deployed onto NVIDIA's Jetson Nano and Raspberry-Pi 3 B+ Microprocessor.

Work Experience

- **KRISHTEC** — Remote
  Python Intern — *July 2021 - Jan 2022*
  - Deploying different machine learning models on NVIDIA's Jetson Nano board.
  - Using DetectNet Neural Network for object detection and recognition.
- **KRISHTEC (COVAILABS)** — On-Site
  Machine Learning Intern — *Dec 2022 - Present*
  - Portable Traffic Sign Recognition based on CNN model with 99.45 % accuracy.
  - Road Lane colour and type detection using open-CV and Tensorflow Object Detection API.
  - Deployed both models on NVIDIA's Jetson Nano and Raspberry-Pi.
  - Recorded performance of the models for Research Publications.

Projects

- **Portable Traffic Sign Recognition using Convolutional Neural Network**: In this project we deploy a traffic sign recognition model on processing units such as development boards like NVIDIA's Jetson Nano. The processing unit is connected to a small display which shows information about the detected traffic sign. The proposed traffic sign recognition model is based on Convolutional Neural Network and boasts accuracy of 99.45 percent.
  Tech: Python, Keras, Tensorflow, CNN
- **Road Lane Colour and Type Detection**: This project can be deployed on portable systems like Jetson Nano or Raspberry-Pi for the purpose of detecting the colour of the Road Lane which is either white or yellow, it also is capable of detecting the type of lane which is either solid or dashed. Finally it outputs an image with detected colour and type of lane.
  Tech: Python, Transfer Learning,open-CV, Tensorflow Object Detection API
- **ADAS**: This project provides a camera assisted ADAS (Advanced Driver Assistance System) which uses Internet of Things and Deep Neural Network.It also has OBD which can be used to diagnose various parameters for determining the health of the vehicle.
  Tech: Python, DetectNet, PyQt5
- **Driving based Insurance System**: (Ongoing) This project provides a credit based Rash-driving insurance system that takes note of the driving patterns of an individual using just a mobile phone.eadings are taken using a mobile application that consists sensors like- 3-axis accelerometer, gyroscope, magnetometer and GPS.
  Tech: Python, Kotlin, Firebase

Achievements

- 4th rank in MLH Local Hack Day.
- 6495th rank in Google HashCode 2020.
- Took 2 Days Machine Learning offline workshop to college students.

Relevant Courses

- Probability and Statistics (III-sem)
- Artificial Intelligence (V-sem)
- Machine Learning (VI-sem)