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Akhilesh Kumar

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Academics

2016-2020 (Expected) | B.Tech in **Electronics and Communication Engineering** — **GPA**: 7.0/10.0
Jaypee University of Information Technology, Waknaghat

Technical Skills

Programming	C++, Python, Javascript
Libraries / Frameworks	Node.js, ReactJS, Tensorflow, Keras, OpenCV, ROS
Databases	MySQL, PostgreSQL, MongoDB
Systems / Platforms	Git, AWS, Docker, Heroku, Azure, Linux

Experience

Jul 17 – May 17 | **Machine Learning Intern** — **USHR, India**
- Interpret data on price, yield, stability, future investment-risk trends, economic influences, and other factors affecting investment programs using Data Analytics.
- Worked on Data Scrapping, Fuzzing, Preprocessing on Documents and Setting up a multi-label Classifier.

Projects

- **Standalone Driving Assistant Unit**
  Developed a dash camera based standalone pipeline with functionalities of Lane Departure Warning, Forward Collision Warning and Tailgate warning.
- **Curved lane lines detection using HSV filtering and sliding window search method.**
  Implemented a Robust Curved lane detection pipeline built on top of Python. Based on HSV filtering and Sliding window search algorithm with overlay of detected road.
- **Labeling pixels of a road in images using a FCN using Semantic Segmentation approach**
  Built a Fully Convolutional Network (FCN) that could label the individual pixels of an image as road or not road. The FCN was trained to recognize two classes: road and not road. The final network was trained for 10 epochs using a batch size of 4 and is based on the FCN-8 architecture built using the VGG network and trained on the KITTI Dataset.

Hackathons & Competitions

Current | **Pedestrian Safety Device** — **Smart India Hackathon '19**
- Built a Pedestrian Detection Pipeline using INRIA dataset and YOLO model with Darknet framework. Comparatively analyzed the efficiency of alert trigger with INRIA and DALIMAR datasets.

Nov 17 | **IoT based Pollution Monitoring and Waste Management for smart cities** — **Smart Cities Hackathon-'18**
- Won 2nd Prize for building a Smart City smart waste management dashboard with various utilities created for municipalities. The dashboard was built with a NodeJS backend and had several utilities including plots, optimal routes, grievance portal and municipal vehicle finder to name a few.

Feb 17 | **Underwater Glider for Real Time Mapping with SensorTag IoT System** — **Murious 2017**
- Accomplished automated glider controlled movement with a ballast system. Developed obstacle-avoiding feature and Interfaced TI CC2650STK SensorTag with Raspberry Pi to retrieve data in real time.

Extracurricular & Leadership

Current | **Founder & Maintainer**, MetaJUIT Wiki
- Responsible for fostering participation, promoting the growth of the group and maintaining the following open-source projects: metaqp, metaYP and metaImplode

Current | **Vice Chairperson**, ACM Student Chapter JUIT
- Responsible for forming event policies, Administratio and managing Robotics & AI Projects in ACM Student Chapter of JUIT.

Current | **Coordinator**, JYC Media & Publicity Committee
- Leading a group of 45 students in areas of Digital Marketing (SMM, Email-Campaign), Graphic Designing/Video Editing

Current | **Overall Coordinator**, TIEDC | E-Cell of JUIT
- Actively building a vibrant startup ecosystems in Himachal Pradesh. I managed and coordinated with a team of 40 volunteers to organize Techstars Startupweekend Solan.