KISHORE REDDY PAGIDI, M.S.

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Availability: Full-Time May 2023

EXPERIENCE

Mercedes-Benz Research and Development North America **Sunnyvale, CA**

HD Maps Intern – Autonomous Driving | C++, Python, GNN, ROS, 4 Patents **June 2022 – Current**

- Developed solution to derive SD maps from HD maps, reducing complexity in global and local navigation.
- Generated dataset of SD maps using C++ and fine-tuned in JOSM map editor, improving accuracy by over 20%.
- Built graph neural network model using SoTA methods to improve SD map generation in complex junctions.
- Converted protobuf map streams from the fleet data into ROS bags used for localization.

Suzuki Motor Corporation **Gurgaon, India**

Assistant Manager – Research and Development | ADAS, Python, NX, 2 Patents **July 2019 - August 2021**

- Performed supplier tech reviews and handled body integration of radar, cameras for ADAS in new models.
- Built a model-based design tool to predict wear and tear reducing design cycle time by 2 months.
- Innovated design concepts for hood and front underbody in Siemens NX and developed 70 parts.

Graduate Engineering Trainee – Research and Development |NX **July 2018 - July 2019**

- Reduced cycle time in a transmission production line by 2 seconds and performed DFMEA analysis.

EDUCATION

Northeastern University (NEU), Boston, MA **September 2021 - Expected May 2023**

Candidate for Master of Science in Robotics, Concentration: EECE 3.97/4 CGPA
Courses: Advanced Perception, Robot Sensing & Navigation, Pattern Recognition & Computer Vision, Robot Control.
Activities: Software lead at Robotics Club, Student Patient Care Associate, Ticketing assistant in Athletics Department.

National Institute of Technology Calicut (NITC), Kozhikode, India **August 2014 - May 2018**

Bachelor of Technology, Mechanical Engineering 7.73/10 CGPA
Courses: Computer Programming, Control Systems, Machine Design, Automobile Engineering.
Activities: Senior Executive in Mechanical Engineering Association, Technical and Cultural Fest Event Organizer.

SKILLS

- **Languages:** C++, Python, MATLAB
- **Frameworks/Libraries:** OpenCV, NumPy, Scikit-learn, Pandas, CUDA, PyTorch, TensorFlow, Raspberry Pi, ROS, Linux, QGIS, JOSM, CARLA Simulator, Siemens NX, Solidworks, CATIA

PROJECTS

Computer Vision| Northeastern University | C++, OpenCV, PyTorch, TensorFlow **September 2021 – Current**

- Developed a 3D object detection model with 99% accuracy using LiDAR PCD from LyftDataset.
- Implemented transformer architecture in machine translation task with 82% accuracy.
- Built VGG based model to transfer style from 2 different images using gram matrices.
- Detected hand raise gestures and attentiveness to measure student engagement in collaboration with Center for Advancing Teaching and Learning Through Research (CATLR) with 85% accuracy.

Sensor Fusion and Analysis | Northeastern University |ROS, Linux, MATLAB, Python **January 2022 – May 2022**

- Built 3D maps using SC-LeGO-LOAM 3D Lidar odometry and mapping pipeline using data collected from Northeastern University's Autonomous Car (NUANCE) VLP-16 lidar and fused with IMU data.
- Created 2D maps after post-processing IMU data and compensated for hard/soft iron effects.
- Developed device drivers in ROS for GPS, and IMU. Analyzed bias drift and calibrated using Allan deviation.
- Developed longitudinal and lateral dynamic models to navigate a self-driving car around a racetrack in the CARLA simulation environment. Created controllers that regulate speed and path tracking performance.