KISHORE REDDY PAGIDI, M.S.

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EXPERIENCE

Northeastern University ~3 months
Graduate Teaching Assistant – Mobile Robotics **Jan 2023 - Present**

- Guiding 50 students with projects related to motion planning, Lie Algebra, ICP, and turtle bots.
- Developed a user-friendly docker container with advanced visualization features.

Mercedes-Benz R&D North America ~7 months
Software Engineering Intern – Autonomous Driving **Jun 2022 – Jan 2023**

- Individually created algorithms in C++ to derive standard definition (SD) maps from high-definition (HD) maps.
- Improved map accuracy by 20% of the generated SD maps through testing and fine-tuning in JOSM map editor.
- Developed 3D object detection method using LIDAR PCD from Lyft dataset by voxelization and bird's-eye-view representation, achieving an average precision of 0.87.
- Filed 4 utility patents in the field of perception and IoT.
- Devised custom CNN model to produce SD maps from HD map using U-Net architecture with 91% accuracy.

Suzuki Motor Corporation ~3 years
Product Design and Development Engineer **Jul 2019 - Aug 2021**

- Achieved 95% accuracy for traffic sign classification model built using PyTorch and Python.
- Developed a scalable machine vision-based weld spot inspection model using Python resulting in 82.4% mAP.
- Generated cost savings through continuous improvement by 14% and filed 2 design patents.
- Designed and developed 70+ Parts and performed DFMEA analysis.
- Performed 6 tech reviews and conducted spec meeting with several component supplies.
- Led working group meetings, collaborated with 15 departments at various stages to resolve and rectify critical problems in tools and processes, and met 100% of milestones on time.

Graduate Engineering Trainee – R&D **Jul 2018 - Jul 2019**

- Built a model-based design tool to predict wear and tear reducing design cycle time by 2 months.
- Won the Best Graduate Engineering Trainee award among 252 new hires.

EDUCATION

Northeastern University (NEU), Boston, MA **Sep 2021 - Expected Aug 2023**
Master of Science in Robotics, Concentration: EECE 3.93/4 CGPA

National Institute of Technology Calicut (NITC), Kozhikode, India **Aug 2014 - May 2018**
Bachelor of Technology, Mechanical Engineering 7.73/10 CGPA

SKILLS

Languages: C++, Python, MATLAB.
Libraries/Frameworks: PyTorch, TensorFlow, OpenCV, ROS, Linux, PostGRES.
Software/Hardware: QGIS, JOSM, CARLA Simulator, PyBullet, Raspberry Pi.
Artificial Intelligence: Computer Vision, Machine Learning, Deep Learning, CNNs, GANs, Transformers.

PROJECTS

Graduate Projects, NEU **Sep 2021 – Present**

- Developed an open-vocabulary object segmentation model using Python on PCD in the Helping Hands lab.
- Improved machine translation performance achieving 25.8 BLEU score using Transformer architecture and parallelization.
- Built highly accurate 3D maps in C++ with loop-closure using SC-LeGO-LOAM 3D Lidar odometry and mapping pipeline, achieving a map accuracy of 0.1m, using data collected from VLP-16 lidar and fused with IMU data.
- Modified Neural Style Transfer architecture to transfer style from 2 images and used SRGAN to increase image resolution.
- Led a team of 4 in detecting real-time hand raise gestures and built a GUI to provide live feedback to host.