**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

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# 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.