

# VAMSEE KRISHNA KELLA

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## EDUCATION

**Master of Science, Robotics and Autonomous Systems, Specialization in Electrical Engineering**

August 2021-May 2023

Arizona State University, Tempe, Arizona

**GPA:3.90/4.00**

**Bachelor of Technology, Electrical & Electronics Engineering**

August 2014-June 2018

Jawaharlal Nehru Technological University, Hyderabad, India

**GPA:3.80/4.00**

## WORK EXPERIENCE

**Research Aide at Arizona State University, USA**

March 2022 – May 2023

- Assisted with various research projects, including data collection, organization, and analysis.
- Conducted literature reviews and summarized findings to support research objectives.
- Contributed to the development and improvement of research protocols and procedures.

**Software Engineer at Accenture Private Limited, Hyderabad**

January 2019 - June 2021

- Developed and maintained 4 GIS software & mapping applications using Python and ArcGIS.
- Designed and implemented geospatial databases to efficiently store and manage spatial data.
- Communicated with customers, conducted extensive research and user testing, and made scalability projections to estimate feature viability with a customer-centric vision.

**Graduate Research Assistant at Power Electronic Lab, CVR College of Engineering, Hyderabad**

May 2016 - June 2018

- Assisted in the research, design, fabrication, and testing phases of a solar electric car project.
- Analyzed and documented system requirements, designed, and fabricated electromechanical parts to meet project specifications.
- Created and validated electrical schematics using industry-standard software/tools.
- Conducted performance tests, electrical test, data analysis, and troubleshooting to ensure the efficient functioning of the solar car's components and systems.

## PERSONAL EXPERIENCE

**Personal Lab/Workspace, Hyderabad**

January 2017 – June 2021

- Established and maintained a personal workspace equipped with CNC Machine, 3D printer, Oscilloscope, and power tools for designing, manufacturing, and troubleshooting hardware designs and electrical circuits.
- Developed and implemented software scripts/codes to integrate hardware components, improving functionality and performance.
- Utilized programming languages : C, Python for Development and Autodesk Eagle and Altium Designer for PCB layouts.

## PROJECTS

**3D Object Detection using Sensor Fusion – ASU (Computer Vision, Deep Learning, Python)**

August 2022 – December 2022

- Created and trained a deep learning approach for computer vision model for 3D object detection using LiDAR and camera sensor fusion, resulting in improved accuracy and efficiency.
- Evaluated the performance of the 3D object detection model on the KITTI dataset, resulting in outstanding results.

**Indoor 3D Reconstruct Using Mobile Robot – ASU (Deep Learning, Python, ROS, Hardware)**

March 2022 – April 2022

- Developed a visual SLAM system using a mobile robot(Hardware Model) equipped with an Intel Realsense D435i camera and ROS, RTABMap to detect objects and approximate their location in a world frame.
- Implemented YOLO object detection algorithm using Python to recognize objects in the 3D reconstructed environment.
- Utilized a high-performance computer to process camera data collected by the robot and stored in rosbags.

**Object Detection of Craters on Mars Surface – ASU (Deep Learning, Python)**

March 2022 – May 2022

- Developed a Faster R-CNN model for the detection of craters on the Martian surface using the GeoAI Martian Challenge Coco dataset.
- Trained the model on over 100,000 photos using a high-performance computing cluster and data parallelization across multiple GPUs.

## TECHNICAL SKILLS

**Programming:** Python and specific libraries(Pytorch, NumPy, pandas, scikit-learn, Keras), MATLAB, C, C++

**Tools & Frameworks:** Git, Linux, Docker, OpenCV, Robot Operating System (ROS),JIRA, Solidworks, Altium Designer, MySQL, GIS

**Hardware:** NVIDIA Jetson boards, LiDAR, Camera

## LEADERSHIP EXPERIENCE

**Vice President | ElectroCruise | Hyderabad**

May 2016 – June 2017

- Orchestrated the development and execution of mandatory training, weekly team meetings, and community service initiatives, resulting in a 5% increase in employee engagement and productivity for a team of 15 individuals.
- Led workshops on PCB design and fabrication as well as MATLAB coding, mentoring and guiding freshman and sophomore students to enhance their design and coding abilities.