VAMSEE KRISHNA KELLA

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EDUCATION

Master of Science in Robotics and Autonomous Systems (EE)   *August 2021-April 2023*
Arizona State University, Tempe, Arizona
GPA: 3.89/4.00

Bachelor of Technology in Electrical and Electronics Engineering   *August 2014-June 2018*
CVR College of Engineering, Hyderabad, India
GPA: 3.80/4.00

TECHNICAL SKILLS

Programming Languages: *Python, SQL, MATLAB, C, C++, SIMULINK.*
Tools & Libraries : *Gazebo, Rviz, Git, GitHub, 3D printing.*
OS and Architectures: *Robot Operating System (ROS), Linux, ASP.Net Framework.*

RESEARCH EXPERIENCE

Research Aide at Arizona State University, Tempe, Arizona   *March 2022- Present*
- Conducting project research, documenting the results, building application and sharing all studies and activities data with required people.

Research Assistant at CVR College of Engineering, Hyderabad, India   *April 2016- April 2018*
- Designed and build a two-seater 3 KW electric vehicle powered by solar panels.
- Engineered the PCB circuits and perform the basic testing.
- Conducted Lab sessions for the junior students.

PROJECTS

Indoor 3D Mapping & Object Localization using UGV *(ROS, Python, Depth Camera)*   *January 2022 – April 2022*
Academic Project, Arizona State University
- Role: Implemented the hardware and simulations.
- Constructed a mobile robot that traverse the environment and generate a 3D Map of the Environment.

Search and Exploration using Multi-robot Systems *(MATLAB, ROS, Python, LiDAR, Camera)*   *August 2021 – Ongoing*
Academic Project, Arizona State University
- Role: Studied and implemented autonomous exploration algorithms.
- Planned and integrated the frontier-based exploration algorithm for 2 mobile robots that traverse the environment in search of a specified object and provide the optimal path information back to the central system.

6-DOF Robotic Arm *(MATLAB, C++, SIMULINK)*   *August 2021–December 2021*
Academic Project, Arizona State University
- Role: Conducted Workspace Analysis and Arm Kinematics.
- Designed and simulated a 6 DOF robotic arm in CAD, performed workspace analysis, joint space and task space trajectories analysis to perform equipment station control for a planetary rover in the University Rover Challenge.
- Performed forward and inverse kinematics for a 6 DOF robotic arm.

Self-driving car using Behavior cloning *(Python, TensorFlow, CNN)*   *April 2021–August 2021*
Personal Projects
- Role: Creation of Train Data and Training of Model.
- Trained a convolutional neural network (CNN) model to simulate a self-driving car by predicting steering angles while driving in a unity simulation.
- Implemented the 10 layers model based on the Nvidia paper and using TensorFlow deep learning library.

WORK EXPERIENCE

Software Engineer at Accenture Private Limited, Hyderabad   *January 2019-June 2021*
- Introduced a new interactive online web interface that allows business users to control regular data changes automatically, saving around 63 hours of human effort every month.
- Integrated and automated the process of giving or revoking user's access, the automation saved 60 hours of human effort per month.
- Enhanced and maintained the client's 3 geospatial databases and 5 applications, primarily using ESRI ArcGIS Desktop Suite and ArcGIS Online on the front end and Oracle SQL, FME, ASP.NET and Python on the backend.

LEADERSHIP EXPERIENCE

Vice President - Electrocruise (Student Organization), CVR College of Engineering   *May 2016–April 2018*
- Administered all Electrocruise initiatives, projects, events and assisted in the development of volunteers.
- Planned mandatory trainings, weekly meetings and prompted community service.

President - MI Fan Club Hyderabad, Hyderabad India   *April 2016–May 2017*
- Conducted official Mi India fan meet up, events in Hyderabad.
- Managed the web sites and Facebook page of Mi Fan Club Hyderabad.

CERTIFICATIONS/ACHIEVEMENTS

- Certification in Azure Fundamentals by Microsoft.
- Certification in Artificial Intelligence & Machine Learning by Defense Institute of Advanced Technology.
- Awarded Accenture Celebrates Excellence Award for Automation & Innovation at Accenture.