PRASHEEL RENKUNTLA

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TECHNICAL STRENGTHS

Programming Languages	C, C++, Python
Software & Tools	MATLAB, Ardupilot, VRep, SOLIDWORKS, Gazebo, RViz, SIMULINK, TF, OpenCV
Operating Systems	Windows 7/8/10, Ubuntu 16.04 (Linux)
Frameworks	ROS (Kinetic Kame)

EDUCATION

University of Maryland, College Park, USA *August 2019 - Present*
Master of Engineering, Robotics CGPA: 3.7

MVSR Engineering College, Hyderabad, India *September 2013 - May 2017*
Bachelor of Engineering, Electronics and Communication. Overall Percentage: 84

EXPERIENCE

University of Maryland, College Park Dec 2019 - Present
Research Assistant under Dr. Huan Xu

· Working on Ardupilot SITL to simulate a fixed wing UAS for mission planning with onboard situational awareness and re-planning. Deployed and Tested the first phase of the project on an aircraft using PixHawk (GC).

Accenture LLC, India Jul 2017 - Feb 2019
Application Development Associate

· Developed an Angular 5 Web application for employees to apply for vacancies internally, that complied with software engineering best practices. Deployed in 2 months, it reduced 75% efforts by project management teams.

JK CEMENT WORKS, India Dec 2015 - Jan 2016
Intern

· Operated and examined the working of a 3 DoF Robot Arm to analyze 6 cement samples at a given time in the lab.

PROJECTS

eco-bot Nov 2019 - Dec 2019
Course Project: Software Development for Robotics

· Designed an autonomous AGV (Turtlebot) in ROS with visualization in Rviz and simulation in Gazebo, that can traverse a world using A* path planner to collect an object (trash). Following Google style guide for C++11/14 standards with CI through GIT, it has a successful build on Travis and a 94% code coverage on Coveralls.

Optimal Controller Implementation on a two load Crane December 2019
Course Project: Control of Robot Systems

· Designed an LQR controller in MATLAB for a non-linear double load Crane system and its linearized version under the given initial conditions, to achieve optimal control in 60secs.
· Using this controller configuration with manually adjusted gains, modeled a Kalman filter to obtain an LQG controller in SIMULINK for both non-linear and linear versions of the system for a step input, to reduce the time taken by 20secs.

Simulation and Analysis of the Ballbot Oct 2019 - Nov 2019
Course Project: Control of Robot Systems

· Designed and simulated the nested control architecture of the ballbot in MATLAB and SIMULINK, to stabilize the robot with an exceptional station keeping (PID and PI) control that balanced the robot in under 10 seconds.

Ackermann Steering Control Module October 2019
Course Project: Software Development for Robotics

· Followed Google style guide for C++ 11/14 standards to create an Ackermann Steering module with PID control in a CMake build system. With CI through GIT, it has a successful build on Travis and 92% code coverage on Coveralls.