Harsha Vardhan Guda

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Education

2016–2020 **Bachelor of Technology in Electronics and Communication Engineering**, *National Institute of Technology Calicut*, Kozhikode, Kerala, India.
GPA - 8.28 *Till seventh semester*

2014–2016 **Intermediate**, *Sri Gayatri Junior College*, Board of Intermediate Education, Telangana, India.
Percentage: 96.8%

March 2014 **Class X**, *Anjali High School, Suryapet, Telangana, India*, Board of Secondary Education, Andhra Pradesh, India.
GPA: 9.8

Skills

Programming Languages — python, C++

Miscellaneous — Proteus Design Suite , Keras , Robot Operating System, OpenCV

Positions of Responsibilities

April 2017 – Present **Member**, *Robotics Interest Group NIT Calicut*.
Robotics Interest Group is a multi-disciplinary group for pursuing robotics.

May 2018 – April 2019 **Programme Manager**, *Robotics Interest Group NIT Calicut*.
Organise Workshop for Freshers on robotics, events during Tathva show-casing the projects done in Robotics Interest Group.

Projects

June 2019 – Present **Drone Based Intelligent Surveillance And Disaster Management System**, *Major project*.
The drone has an on-board camera and processor to process the live feed of video-stream and is used as an aid in rescue operations during disasters.

June 2019 – Present **Autonomous Navigation of Four Wheeled Base using Passive Encoders**.
Navigation of a four wheeled base using passive encoders to achieve precise indoor location of robot and implement control loops for its navigation. Mathematically model the system and validate from the experimental data.

June 2018 – Present	**Interactive Robot for Reception and Medical Care (Project RIGGU).** An interactive robot to receive people and assist them is developed using deep neural networks. It has capabilities such as face, object,emotion recognition, speech recognition and synthesis, all these are integrated using Robot Operating System(ROS).
January 2019 – May 2019	**Sign Language to Text Conversion using Deep Neural Networks.** A stand-alone device to recognise 26 alphabetical signs and some basic actions in Indian Sign Language is developed to work on any small scale computers.
Sept 2018 – Dec 2018	**Quadruped**, Designed and fabricated a four legged robot to evaluate various gaits. It runs using servo motors.
June 2018 – May 2018	**Flight Controller for Drone.** Design and fabrication of a flight controller for drone using AtMega328P microcontroller.
August 2017 - March 2018	**Manual Robot for Robocon - 2018**, Algorithm for motion of manual robot (four wheeled) to achieve the task of handing over shuttlecock to autonomous robot..

Extracurricular and Achievements

June 2019	Taught a lecture series on "Image Processing and its Implementation using OpenCV-Python".
August 2018	Volunteered in flood relief camps during Kerala Floods.
March 2018	Represented NIT Calicut in Robocon 2018, an International Robotics competition held in Pune.
Feb 2018	Volunteered in the 10K mini Marathon conducted by IIM Kozhikode in 2018.
February 2018	Conducted mock JEE Main test and JEE counselling sessions in a nearby Government School.
2017 and 2018	Organised "Introduction to Robotics" workshop consisting of 300 participants for two consecutive years to create interest among first years in the field of robotics.
2017	Quarter-finalist in India Innovation Challenge Design Contest 2017 by Government of India and Texas Instruments.
2016	Stood second in the state in the Smart Test conducted by Eenadu *(Highest circulated Telugu newspaper).*

Publications

M Uday Girish, Guda Harsha Vardhan and Sudheer A P, *"RIGGU: A Semi-Humanoid Robot Platform for Speech and Image Recognition".*
in Fifth International Symposium on Intelligent Systems Technologies and Applications (ISTA'19), IIITMK, Trivandrum, Kerala, India.