Vishnu Rudrasamudram

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EDUCATION

Worcester Polytechnic Institute
MS in Robotics Engineering, Jan 2018 - Dec 2019 (Expected)

Rajiv Gandhi University of Knowledge Technologies, RK Valley
Bachelor of Technology, May 2015 GPA: 8.9/10
Concentration: Electronics and Communication Engineering,
Coursework: Programming and Data Stuctures, Design of Algorithms, Intro. to Mechanics, Control Systems, Digital Electronics, Digital Signal Processing, Digital Image Processing, Computer Vision, Data Mining, Pattern Recognition and Machine Intelligence

EXPERIENCE

Project Research Assistant Dept. of Systems and Control Engineering
Feb 2017 – Dec 2017 IITB, Mumbai, India
Supervisor: Prof. Arpita Sinha

- Developing algorithms for path planning and patrolling for autonomous car-like vehicle in an urban campus environment
- The algorithms were implemented in python using Robot Operating System in Ubuntu 14.04 Environment.

Project Engineer Wipro Technologies
Aug 2015 – Jan 2017 Hyderabad, India

- Got trained on C++/Unix Systems, Perl and Shell scripting
- Worked on various projects using C, C++ and Javascript
- Simultaneously worked as a Linux System administrator.

Research Intern Robotics & Intelligent Systems Lab
June 2014 – Aug 2014 IIT Kharagpur, India
Supervisor: Prof. CS Kumar

- Worked on development of Android applications for LEGO MINDSTORMS NXT robots using App inventor2
- Implemented algorithms pertaining to Control systems through Android application for Self-balancing robot

Robotics & Embedded Sys. Trainee i3indya Technologies
May 2013 – June 2013 Hyderabad, India

- Interfaced various input and output devices with the microcontroller - AVR Atmega16, and programmed using Embedded C. About 30 applications were programmed.

SKILLS

Programming Languages: Python, C, C++, Javascript, Java, Perl, Shell
Software: ROS, OpenCV, MATLAB, Numpy, Matplotlib, LaTeX.
Hardware: Microcontrollers (Arduino/Atmega, MSP 430), Spartan 3E
Operating Systems:Windows, Linux/Unix
Others: Basic Web desiging, Photoshop, Processing

PRESENTATION

N. Naga Srinivasarao, **R. Vishnu Vadhan**, M. Vinay Kumar, Design of Electronic Logic Circuit for Auto Irrigation Unit at 29th National Convention of Electronics and Telecommunication Engineers, 29-30 October 2014 at The Institute of Engineers, Hyderabad, India.

UG FINAL PROJECT

Indoor Aerial Imaging Using MAV Dec 2014 – Apr 2015
Supervisor: Ramakanth Yadav, Lecturer, ECE Dept., RGUKT RKV

Programmed a drone using Robot Operating System (ROS) to travel in an indoor environment and capture images, and stitched all images to get high detail mosaic view of that area. It is implemented on Parrot AR Drone. Operating system used was Ubuntu with ROS (python) and OpenCV (python).

PROJECTS

Face Tracking Using Quadrotor Drone Team size: 2
Robotics, Computer Vision

Programmed the drone to track the human face using its front camera and change its yaw according to the face movements. It is made on Robot Operating System (ROS) using Autonomy package and implemented on Parrot AR Drone.

Aerial Robot to Aid Agricultural Industry Team size: 5
Embedded Systems, Design, Robotics
Guide: Naga Srinivasa Rao, Lecturer, Mechanical Engg., RGUKT RKV

Executed Design and implementation of Quadcopter embedding different sensors and modules.

Android Device controlled Two Wheel Self-balancing Robot Team size: 2
Robotics, Control Systems

An android application is developed to balance a two wheel LEGO robot. The android device is the part of the system which is used both as sensor to sense the tilts and processor to process the signals and give control commands.

Auto Irrigation Unit Using Embedded Systems Team size: 3
Embedded Systems
Guide: Naga Srinivasa Rao, Lecturer, Mechanical Engg., RGUKT RKV

The project aimed at achieving very effective automation at low cost in the field of agriculture. Dummy roots (tentiometers) are placed in various points in the field, which sense and interact with microcontroller for processing and automating irrigation.

Optimal Route Finder
Algorithms

This program displays optimal routes for a set of source and destination cities. The optimality of the route (distance or cost) is decided by the user. This is programmed in C++ using STL, and Depth First Search algorithm is used to find all possible routes.

ACTIVITIES

Organized LabView Workshop at Abhiyanth15, a Technical Fest at RGUKT RKV

Event Coordinator for Zonal Rounds of RoboTryst-2015.

Robotics Club, RGUKT RKV Founder

Participated in a two-day workshop on Quadcopter Designing as part of zonal round competition at IIIT-H conducted by Robosapiens Technologies Pvt. Ltd. in association with Tryst 2014 IIT Delhi.

Participated in Reformnation A Challenge to lead India, organised by Techfest, IIT Bombay.

Attended a National Seminar on Emerging Trends in Electronics and Telecommunication Engineering at 29th National Convention of Electronics and Telecommunication Engineers, The Institute of Engineers (India).

Attended a two-day workshop on Li2 Augmented Reality (image processing based robots using microcontrollers) conducted during ENGINEER 2012, at NIT-K Surathkal.

Volunteered as a Web Casting Engineer

- Bye-Elections at Kurnool - 2012
- General elections at Ananthapur - 2014.