VISHNU RUDRASAMUDRAM

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Education

Rajiv Gandhi University of Knowledge Technologies, RK Valley **Graduated: May'15**
B.Tech , Electronics and Communications Engineering CGPA : 8.9/10
PUC CGPA: 9.53/10

Experience

Project Engineer **Aug'15 – Present**
Wipro Technologies

Research Intern **June'14 – July'14**
Robotics and Intelligent Systems Lab, IIT KGP

Skills

Programming Languages: C, C++, Python, Matlab
Software: ROS, OpenCV, Matlab, NI LabView
Hardware: Microcontrollers (Arduino, ATMega, MSP 430)
Operating Systesm: Windows, Unix (Linux, Fedora)

UG Final Project

Indoor Aerial Imaging Using Micro-Aerial-Vehicle **Dec'14 – Apr'15**
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).

Internships

Developing Applications for Lego Mindstorms Nxt Robots In Android **Jun – Jul'14**
Supervisor: Prof. C.S.Kumar
Institute: CAD-CAM and Robotics Laboratories, IIT-Kharagpur.

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

Robotics and Embedded systems **May'13-Jun'13**
Organization: I3indya Technologies, Hyderabad

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

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.

Projects

FACE TRACKING USING QUADROTOR DRONE **Team size: 2**

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**

Guide: Naga Srinivas Rao, Lecturer, Mechanical Engineering, RGUKT, R.K.Valley

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

ANDROID DEVICE CONTROLLED TWO WHEEL SELF BALANCING ROBOT **Team Size: 2**

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**

Guide: Naga Srinivas Rao, Lecturer, Mechanical Engineering, RGUKT, R.K.Valley

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

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.

Achievements

1st position in zonal round of Robotryst-2014, National Robotics Championship; selected for Grand Finale held at IIT-Delhi.

Secured 3rd position for the paper titled “T.E.C.H” in paper presentation event at ENGINEER 2012, Annual Technical Fest, NITK, Surathkal.

Activities

Organized LabView Workshop at Abhiyanth’15, 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 Reform’n’ation – 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.

Integral part of Kho-Kho team in school and college