Chirag Shah

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Career Objective

To obtain a niche position in the Electronics Industry where I can utilize my experience and skill of combining hardware and software to create a meaningful product for the organization.

Education

2015 - 2019	Currently studying in third year, Electronics Engineering Sardar Patel Institute of Technology	7.3 CGPA
2015	HSC - Maharashtra State Board PACE Junior Science College, Dadar	82.31%
2013	SSC - Maharashtra State Board St Xavier's High School, Fort	87.5%

Projects and Competitions

e-Yantra Robotics competition 2016 (1st Prize)

- e-Yantra is an initiative to spread education in Embedded systems and Robotics by **IIT Bombay sponsored by Ministry of Human Resource Development**
- Students in a team of 4 program a given robotic platform to solve a problem. The competition was from **Nov 2016 to April 2017**
- In eYRC 2016 - **22,608 Students in 5,652 Teams registered for the event. 3,620 Students in 905 Teams** participated in the competition which were spread across 7 themes
- Our team came **first of the 167 teams** that participated in "Launch a Module" theme
- I designed the hardware of the robotic arms and did the embedded C programming for the Firebird V robot. Click on this link for a video of the project

Formation control of Multiple Swarm Robots – eYantra Summer Internship

- The objective of this project was to explore algorithms to control groups of robots all at once and make different swarm formations
- I did the embedded C programming for the swarm robots
- Click on this link for a video of the swarm formations

DIY Time-lapse Dolly in the Raspberry Pi Contest 2016 (1st Prize)

- Instructables is a website specializing in user-created and uploaded do-it-yourself projects
- The Instructable can be viewed at http://www.instructables.com/id/DIY-Time-Lapse-Dolly-1/
- This setup is used for adding motion to a time lapse photo sequence
- **I conceptualized, built and wrote the Instructable for building the Time Lapse Dolly**
- I won the first prize (3 first prizes) in this competition out of 198 entries from around the world

Robot development using ROS (ongoing)

- This project deals with exploring the Robot Operating System (ROS) framework

- We will develop a robotic system with various sensors and actuators to understand the underlying concepts
- The outcome is to create a robot/quadcopter capable for forming a 3-D map of the surroundings using a depth camera (Microsoft Kinect)

Constant Current Load (ongoing)

- This circuit uses a MOSFET and an op-amp to create a variable resistance load which will maintain a set current flowing through it
- The current and voltages are displayed on an onboard LCD using a ATMega microcontroller
- It can be used to test solar panels, power supplies to test the ratings and specifications
- I designed the circuit and built a PCB for the same

Troubleshooting competition (2nd Prize) – Department of Electronics SPIT

- This is an annual competition held by the Electronics Department of SPIT
- The task was to debug an electronic circuit in simulation and hardware, find out the fault and rectify it

Trainings and Internships

- **IIT Bombay** - 7 weeks summer residential internship (22/May/2017 to 7/July/2017) under the eYantra Summer Internship 2017 program
- **SPIT** - 3 weeks summer training program on Embedded Systems Design held from 13/June/2016 to 8/July/2016
- **SPIT** - 2 days MSP-FPGA software and hardware co-design held from 16th to 18th September 2016 at SPIT, Mumbai

Technical Skills

- Embedded C programming (ATMega µCs, esp-8266, Arduino)
- Complete PCB designing and fabrication (power supplies, µC board, constant current load PCB)
- Basic image processing using OpenCV and python
- Basic FPGA programming Atlys Spartan-6 trainer board
- Project Management using GIT
- Document formatting using LATEX

Soft Skills

- Patient and persistent in completing my projects
- Willing to learn new skills as per the requirements of the project

Other Interests

- PADI Level 2 certified SCUBA diver
- Sailing and Wind Surfing
- Photography
- Rubiks cube enthusiast

Co-curricular activities

- SP-Open Mini 2015 (speed cubing competition) – in charge of volunteer training
- Class Representative – FY, SY and TY (Electronics Engineering)