Chirag Shah

+91 9769168825
chirags1998@gmail.com

Website: chiragrshah.com
Github: github.com/chirags98/

16, Marina House
5 Sir V. T. Marg
Opp Liberty Cinema
Mumbai 400 020

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 in final year, Electronics Engineering Sardar Patel Institute of Technology	7.9 CGPA (Upto Sem 6)
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 / Achievements

e-Yantra Robotics Competition 2016 : 1st Place

e-Yantra is an initiative to spread education in Embedded systems and Robotics by **IIT Bombay sponsored by Ministry of Human Resource Development.** In eYRC 2016 **3,620 Students in 905 Teams** participated in the competition which was spread across 7 themes.

- Secured **first place among 167 teams** that participated in "Launch a Module" theme
- Designed and built the hardware of the robotic arms and programmed the Firebird-V robot in embedded C (ATMega 2560)

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

- Designed setup for adding motion to a time lapse photo sequence
- The Instructable can be viewed at http://www.instructables.com/id/DIY-Time-Lapse-Dolly-1/
- Won the **first prize** (3 first prizes) in this competition out of 198 entries from around the world
- Conceptualized, built and wrote the Instructable for building the Time Lapse Dolly

Constant Current Load

You can dial in any current that you want and the circuit will adjust itself to draw that much current from the supply regardless of the supply voltage. This can be used to test the ratings and specifications

- This device uses a MOSFET and an op-amp to create a variable resistance load which will maintain a set current flowing through it
- The current, voltages, power dissipated are displayed on an onboard LCD using a ATMega microcontroller
- I conceptualized the device, designed the PCB and had it professionally printed
- This gave me an end to end experience of creating a professional PCB

3D Indoor mapping using ROS

I wanted to learn the ROS (Robot Operating System) framework. We have been able to wirelessly create a 3D map of an environment using a Kinect sensor and a Raspberry Pi

Troubleshooting Competition: 1st Prize 2017; 2nd Prize 2016

- 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

Fractal Analytics Internship – Room Occupancy Monitoring System

Ongoing internship to implement a network of room occupancy sensors across multiple meeting rooms to sense the occupancy of the room and upload the status to a cloud database via a master receiver

- The occupancy status is sent to AWS IOT core and then pulled to dynamo DB
- The devices are designed to be battery operated and consume very low standby current
- The devices connect via a mesh network of RF trans-receivers

eYantra Summer Internship - Formation Control of Multiple Swarm Robots

7 weeks summer residential internship (22/May/2017 to 7/July/2017) at **IIT-Bombay** under the eYantra Summer Internship 2017 program

- The objective of this internship 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 (ATmega-16)

Fractal Analytics Internship – Hololens Experience

5 weeks internship (27/Nov/2017 to 5/Jan/2018) at Fractal Analytics – Mumbai.

We built the application for the Hololens in which one can interact with the products kept on the holographic shelf and then see the resulting analysis in the form of 3D holographic pie charts, bar graphs and heat maps. We developed 3 use cases in our application

- Share of Sight Analysis (which shelf/products receives the most attention)
- Share of Shelf and Share of Rack Analysis (share of brand/products on the shelf)
- Compliance (are retailers complying with their agreements for product display with the manufacturers)

SPIT - 3 weeks summer training program on Embedded Systems Design held in June 2016

Technical Skills

- Embedded C programming (ATmega µCs, esp-8266, Arduino)
- Complete PCB designing and fabrication (power supplies, µC board, constant current load PCB)
- Game development in Unity and scripting in C#
- Basic image processing using OpenCV and python
- Basic FPGA programming Atlys Spartan-6 trainer board
- Project Management using GIT

Co-curricular activities

- Conducted a 2 day hands on workshop on "Introduction to Microcontrollers, Sensors and Embedded C programming using Arduino"
- Designed and manufactured a custom PCB for conducting a 2 day hands on workshop on "Introduction to PCB designing, Soldering, Embedded System board design and Embedded C programming"..
- SP-Open Mini 2015 (speed cubing competition) – in charge of volunteer training
- Class Representative – FY, SY and TY (Electronics Engineering)

Other Interests

- Certified PADI Advanced Open Water SCUBA diver
- Sailing and Wind Surfing
- Photography
- Rubik's cube enthusiast