Adarsh Pal Singh

Second Year BE Student
Electronics & Telecommunication Engg.

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Academic Details

Year	Degree/Certificate	University/School	CGPA/%
2014-Present	B.E (Electronics & Telecommunication)	Army Institute of Technology (University of Pune)	88.65% (Till 3rd Sem) **Institute Rank: 1**
2014	Class XII (CBSE)	APS Allahabad	93.2%
2012	Class X (CBSE)	APS Allahabad	10 CGPA

Objective

To pursue graduate studies in Electronics and eventually join the Research & Development division of a progressive organization that gives an opportunity to enhance my knowledge and utilize my skills towards the growth of modern society.

Major Projects

Smart Doorbell using Beaglebone Black (IoT Project)

Prof. Dhananjay V. Gadre
Dr. Tarun Kumar Rawat

Winter Internship Project at NSIT Delhi

December 2015

The main objective of this project was to design a smart doorbell which will *capture a picture* and *record an* audio *message* of the person who presses your doorbell. Both this picture and audio file is then sent to your *WhatsApp* account in a matter of seconds; all thanks to the IoT capabilities of the Beaglebone Black. Devices such as a *webcam*, *speaker* and *microphone* were interfaced with the Beaglebone and controlled via two parallel programs written in *Python*.
Project Video: https://www.youtube.com/watch?v=cAU5x9muRNg

IEEE Paper on Effect of Electrode Shape on the Parameters of Supercapacitor

Dr. PB Karandikar

Research Project at Electrical Dept, AIT Pune

January 2015 - May 2015

The main objective of this project was to determine the deviation in the parameters of *prismatic type supercapacitor* when only the *shape of electrode* base is changed keeping all other factors such as base area, carbon loading, electrolyte concentration constant. Eight supercapacitors with different electrode shapes were fabricated in the lab and then tested several times to establish a new shape based model.
An IEEE paper was written and presented in *International Conference on Instrumentation and Control* [ICIC-2015] held at College of Engineering, Pune.
IEEE Xplore: ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=7150826

Other Projects

Multipurpose Cape for Beaglebone Black (PCB)

PCB designing Project at NSIT Delhi   *December 2015*

A multipurpose cape consisting of a 7 segment display, potentiometer, LED, pushbutton and various sensors such as LDR and thermistor was designed in *eagle CAD* and fabricated by hand.

Bluetooth Digital Clock based on Arduino

Independent Project.   *October 2015*

In this project, a 16x2 LCD module was interfaced with Arduino along with LM-35 temperature sensor and HC-05 bluetooth module. Time can be set wirelessly using a Bluetooth terminal on any smartphone.
HackADay: https://hackaday.io/project/8710-arduino-based-digital-clock-with-bluetooth-module

Scholastic Achievements

- **Institute Rank 1:** Topped the first year batch of my college with overall 88.57%. Set a new record in Semester 1 by getting above 90% for the first time in college history.
- Received **AGIF Merit Scholarship** (Rs. 40,000 per year) twice in a row for excellent academic performance.
- Ranked in **top 5%** in JEE Mains 2014 among 1.3 Million students from all over India.
- Received a **Certificate of Merit** from CBSE for obtaining 10 CGPA in Class X.

Conferences/Workshops Attended

- Attended **IEEE Conference** ICIC-2015 in COE, Pune and presented **Research Paper** titled *"Effect of Electrode Shape on the Parameters of Supercapacitor"*.
- Attended the **Texas Instruments** sponsored Winter Training Program at **NSIT Delhi** from 7th Dec 2015 to 1st Jan 2016**.** The month long programme focused on core electronic subjects, **PCB** fabrication and Embedded System Design with **Beaglebone Black**.
- Attended a two day training programme undertaken by various professors and industry experts as a part of **Robotics Society of India** initiative. The workshop was held in college exclusively for RSI members.
- Attended a two day workshop on **Arduino** microcontroller and Line Tracing bot design by AIT Robotics Club.
- Attended a Value Added course on **C++** in Semester 3.

Technical Skills

- **Programming Languages:** Python, C/C++, Embedded C, Bash and basics of VHDL.
- **Software Packages:** Keil, Xilinx, Qt Framework, OpenCV (Python)
- **Hardware Platforms:** Beaglebone Black, Arduino, Tiva TM4C123G (in progress).
- **OS Platforms:** Linux (Familiar with Debian, Ubuntu and Kali Linux), Windows.

Extra Curricular Activities

- Secured All India Rank **40** in **National Creativity Aptitude Test** (NCAT) 2015. Represented college for the Final round of NACT in New Delhi.
- Our team of 5 students got a special Jury Award (4th Place) for excellent performance in **CII** sponsored Hackathon, **India@75** 2016.
- One of the 10 teams all over India to be selected for **Make In India** 2016 Hackathon at **IIT Bombay** (Awaiting Result).
- Received **A+** grade in **Credit Based Assessment** for excellent overall performance in the year 2015.
- 1st Runner Up in HackingBad, a 48 hour **Hackathon** organized by college.
- 1st Runner Up in **Line Tracer** competition in Solutions 2015, an inter-college tech fest.
- 1st Runner Up in Nand-It (a competition based on **Digital Electronics**) in Inter-branch Tech Fest.
- Student Member, IEEE and IETE.

Positions of Responsibility

- Member of **Student Council**.
- Served as a mentor in **Arduino Workshop** organized for the First Year students by AIT Robotics Club.
- **Student Mentor** for the Electronics Department First Year Students. Helped them get acquainted with college studies and environment.