



**Bhaskar Kaushik**  
B.Tech. Electrical Engineering  
UG(III Year I Semester)  
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**Indian Institute of Technology Roorkee**

**Area(s) of Interest:** Electronics, Robotics, Management

Educational Qualifications	Year	Board/Institution	CGPA* / %
B.Tech. 2nd Year	2016	I.I.T.Roorkee	8.924
Twelfth	2014	Abhinav Public School	93.4
Tenth	2012	Alpine Public School	10.0

\*on a scale of 10

## PROJECTS

### **Electrical Engineering, I.I.T. Roorkee ( Summer Undergraduate Research Award)**

#### **GSM based Remote Monitoring of Distribution Transformer** (May 2016-Ongoing)

Objective: To develop a hardware model which can continuously monitor Distribution Transformer parameters (load current, oil temperature etc) using different sensors and remotely sends to a control room using internet (GPRS).

A database is created to collect all data of transformer and predict its future performance with the help of performance chart .It uses a microcontroller with a GSM shield installed at site of distribution transformer to send different parameters to a databse (using GPRS) and as an SMS to particular mobile number.

A web interface was created to get data from database anywhere over the internet(<http://www.sura2016.cu.cc/>)

### **ABU ROBOCON 2016, Pune**

#### **ROBOCON** (August 2015- March 2016)

Currently part of "Team Robocon I.I.T. Roorkee" which participates in National Level Robotics Competition "ABU ROBOCON". Last year we participated in it.

Our team secured 5th rank in 105 total teams.

My work was on navigation of differential robot on different path using encoders and IFM sensors.I also worked on PCB Designing.

### **Models And Robotics Section, I.I.T. Roorkee**

#### **Self Balancing Bot** (January 2015-March 2015)

Got Second prize in our category in Srishti (Hobbies Club Annual exhibition) 2015

Designed and controlled a two wheel robot which can balance on itself using IMU (Inertial Meaurement Unit) as a feedback. Applied basic control algorithms like PID to balance our bot. Learnt about difference between different communication protocols (Serial, I2C etc.).

### **Electronics Section, I.I.T. Roorkee**

#### **Virtual Piano** (February 2015-March 2015)

Implementation of Image Processing on MATLAB. Different sounds were played on computer with different positions of finger on a blank paper. Learnt basic algorithms of Image processing.

Exhibited it in Srishti 2015 (Hobbies Club annual exhibition)

## SKILLS AND ACHIEVEMENTS

### **Computer Languages**

C++, Python, PHP, HTML

### **Software Packages**

MATLAB, Arduino, MultiSim, Simulink, EAGLE, TSPICE, Git.

<b>Academics</b>	Qualified For K.V.P.Y. in class 12. Secured 1620 rank in JEE Advanced 2014 Secure 1920 rank in JEE Mains 2014
<b>Additional Courses Taken</b>	Robotics Control and Automation, Single Chip microcontroller and its application, Circuits and Electronics.
<b>Languages Known</b>	English (SRW) , Hindi (SRW)

## EXTRA CURRICULARS

### **Electronics Head, Team Robocon** (April 2016-ongoing)

Currently holds the position of Electronics head, Team ROBOCON, I.I.T. Roorkee, a team consisting of 25 students which works in designing and automation of a robot to perform specific tasks according to problem statement issued by ABU (Asia Pacific Robot Contest) ROBOCON every year.

### **Project Manager, Models And Robotics Section** (2016)

Mentored a project (Rope walker) in Srishti 2016. A bot was designed which slides on a rope fixed between two points and it continuously captured videos of environment and sent it to a monitor. This project was displayed in Srishti 2016.

### **Code.Fun.do** (2016)

Developed an Windows Application (Yoga teacher) which uses Kinect to detect different joint angles and guides user to perform different poses of yoga accurately.

### **Cyborg Breakin Co-Cordinator, Cognizance 16** (2016)

Was co-cordinator of robotics event Cyborg breakin in Cognizance 2016.

### **National Service Scheme (NSS)** (2014-2015)

Participated in various activities like teaching underprivileged children in villages, collecting relief funds for flood victims under RT(Rural transforming) Education cell of NSS. Was part of team which organised various events of school children of villages.

## PERSONAL DETAILS

**Father's Name:** Sunil Kumar Thakur

**Date of Birth:** Dec. 1, 1997

**Gender:** M

**Contact No:** 7060214633

**Permanent Address:** HOUSE No 1455, SEC 44 B, Chandigarh - 160047

**Current Address:** F-97, Govind Bhawan, IIT Roorkee-247667

## REFERENCES

### **Prof. S.P. Singh**

Professor, Electrical Engineering Department  
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### **Prof. Pramod Agarwal**

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