

# Kawaljeet Kumar| 12EC10029

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## EDUCATION

Program	Institution	%/CGPA	Completion
B-Tech in Electronics and Electrical Communication Engineering	Indian Institute of Technology, Kharagpur	6.90	2012-Present
XII (CBSE)	Millia Convent English School, Purnia	83.2%	2011
X (CBSE)	Kendriya Vidyalaya Katihar	88.4%	2009

## INTERNSHIP AND PROJECT

- **Developed Home Automation System (Sulin Automation)** (May 2013-June 2013)
  - Developed **wireless fan speed controller** and **light switching circuit** controlled by microcontroller
  - **Interfaced GSM** and microcontroller with all **electrical appliances**
- **Organized Robotics Workshop at school level across India (Sulin Automation)** (Sept 2012-June 2013)
  - Conducted **8 robotics workshop** with around **1300 participants** overall
  - **Designed robotics workshop modules** and started a blog on **reverse engineering**
- **Designed Course on Making of Pressure Sensor (Rootstalk Academy)** (December 2014)
  - Made content and video tutorials for e-learning course on Pressure sensor

## POSITION OF RESPONSIBILITIES

- **Electronic Research Associate, AGV Research Group IIT KGP** (Aug 2013- Present)
  - **Developed Throttle Control** of self-drive car using servo
  - Implemented **Cruise control, Battery Management and Monitoring, Localization** of vehicle
  - Designed full feature test robots to test localization and mapping algorithms
  - Currently designing assistive driving system using **machine learning**
- **Mentor, Robotics Winter Workshop** (December 2013)
  - Mentored **14 participants** about **basics of robotics**, Atmega microcontroller and Sensor interfacing
  - Helped the participants in making **line follower capable of detecting vibration along path**

## ACADEMIC ACHIEVEMENTS

- Secured **37<sup>th</sup> AIR** in **Junior Mathematics Olympiad** organized by **Kendriya Vidyalaya Sangathan**
- Recipient of **Merit-Cum-Means Scholarship** due to **consistent academics performance**

## SHORT TERM AND ONLINE COURSES

- **Short Term Course on Geological Exploration by Ground Penetrating Radar** (May 2013)
  - Learnt about **GRP data interpretation** and exploitation using **image processing techniques**
  - **GPR modeling** and application and measurement of soil parameters
- **Online Courses** (May 2013- June2014)
  - Control of **Mobile Robotics** by **Georgia Institute of Technology**
  - **Learning from data by Caltech** and **Machine learning by Stanford University**

## SKILLS

- C language , **Control System**, **AVR Coding**, Proteus, Sensors interfacing, **Machine learning**, Internet of things

## EXTRA CURRICULAR/CO-CURRICULAR ACTIVITIES

- Participated in **Intelligent Ground Vehicle Competition, Michigan '14** (May 2014)
  - Lead a team of 6 members to to work on electronic design, SOC Estimation, Battery swapping
  - **Interfaced analog stick** for manual control
- **Lead a team of 8 members** and explored on rural education at **NSS IIT Kharagpur** (Aug 2012-April 2014)
- **Gold** in Open IIT **dramatics**