

Shivank Garg

Third year Undergraduate
Department of Electrical Engineering, IIT Kanpur

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EDUCATIONAL QUALIFICATIONS

Year	Degree	Institute	CPI / %
2020*	B.Tech. in Electrical Engineering	Indian Institute of Technology, Kanpur	8.1 [‡] /10
2016	Class XII, CBSE	Emmanuel Mission School, Kota	93.6%
2014	Class X, CBSE	St. Francis School, Hathras	10/10

[‡] till the end of 4th semester * represents expected completion

ACADEMIC ACHIEVEMENTS

- Secured **All India Rank 729** in Joint Entrance Examination(JEE Advanced) 2016 among 200,000 students
- Secured **All India Rank 2190** in Joint Entrance Examination(JEE Mains) 2016 among 1,300,000 students

INTERNSHIP EXPERIENCE

- LoRaWAN Implementation for Soil Monitoring** May'18 - July'18
Internship: *Kritsnam Technologies Pvt. Ltd. and Prof. Ketan Rajawat, Department of EE, IIT Kanpur*
 - Compared different **LPWAN** technologies for the development of soil monitoring wireless sensor network
 - Studied **LoRaWAN MAC layer** and set up an environment for LoRa Nodes, Gateways, and Server
 - Optimized the PyCom LoRa Nodes on issues related to **Power consumption, ADC and Range**

TECHNICAL PROJECTS

- Design of a Network and Application** Sep'18 - Nov'18
Supervisor: *Prof. Dheeraj Sanghi, Department of CSE, IIT Kanpur*
 - Provided the solutions for **designing a Network** of a building and connecting it to outside world
 - Designed a Python based **Collaborative Painting** application that runs on Client-Server architecture.
 - This application enable multiple users to share a canvas in real-time and draw simultaneously.
- Dual Foot-Mounted Inertial Navigation System** June'18 - July'18
Supervisor: *GT Silicon Pvt. Ltd. and Prof. Amey Karkare, Department of CSE, IIT Kanpur*
 - Fused the **PDR** data of two motion-sensing oblu device to reduce the systematic heading drift error
 - Integrated **Firebase** and **AWS EC2** with **ESP8266** for real-time processing of motion sensing data
 - Used **matplotlib** to track real-time path and comparison of raw and corrected PDR data for benchmarking
- Prosthetic Arm** May'17 - July'17
Robotics Club, Science and Technology Council, IIT Kanpur
 - Designed and controlled an **3-D printed** artificial gripper based on the concept of a prosthesis
 - Used **flex** sensor, **Servos** and **Bluetooth** Module for communicating with the gripper and controlling it
 - Represented IIT Kanpur in **Inter-IIT Tech Meet** and awarded with **Best Social Project** by SnT, IIT Kanpur

RELEVANT COURSES

Signals, Systems and Networks	Computer Networks [†]	Probability and Statistics
Digital Electronics	Control System and Analysis	Microelectronics-I
Data Structures and Algorithms	IoT System and Design	Principles of Communication [†]

[†] represents ongoing courses

TECHNICAL SKILLS

Programming - C, C++, Python, Shell **OS and Platforms** - Windows, Linux, Arduino, ESP8266, Raspberry Pi
Software and Tools - MATLAB, Fusion360, L^AT_EX, Git, MS Office, Vim, MicroCap, KiCad, NS3

POSITION OF RESPONSIBILITY AND SOCIAL INITIATIVES

- Secretary, Robotics Club, IIT Kanpur** Apr'17 - Apr'18
 - Promoted Robotics as a hobby among IITK community by organizing workshops, lectures and competitions
 - Handled a budget of **₹1,20,000** for maintenance of club machinery, inventory and club event conduction
- Prayas, An IIT Kanpur Initiative** - Collaborated with a team of 40+ volunteers, aiming to solve educational, health and financial problems of about **60** marginalized kids

EXTRA CURRICULAR

- Video and Film Making** - Directed and wrote scripts for short movies to upload it on YouTube
- Cultural Activities** - Participated in Inter-Hall cultural events of Hindi Sahitya Sabha, IITK
- Senior Election Officer, General Election'18** - Worked in a three-tier team for successful conduction of free and fair elections among the campus community