Shivank Garg

Third year Undergraduate
Department of Electrical Engineering, IIT Kanpur

✉ shivankg@iitk.ac.in | 🌐 home.iitk.ac.in/~shivankg
☐ (+91)-9680 469 015 | in linkedin.com/in/shivankgarg98

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, LATEX, 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