

**Ankush Singh**

Department of Electrical Engineering  
Indian Institute of Technology Kanpur, India  
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My academic interests are in Communication Systems and Computer architectures.

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**Education**

Degree	Year	Institute/School	CGPA/%
BTech	2020	Indian Institute of Technology Kanpur	X.XX/10.0
Class XII	2015	Convent of Gagan Bharti Sr. Sec. School	XX.X%
Class X	2013	Convent of Gagan Bharti Sr. Sec. School	XX.X%

**Course Details**

Semester	Total Credits	Highlights
Aug 2015-Dec 2015	51	MTH101
Jan 2016-Apr 2016	47	MTH102,ESC101
Aug 2016-Dec 2016	59	ES0207,EE200
Jan 2017-Apr 2017	63	MSO201,ESO203,EE250
Aug 2017-Dec 2017	65	CS771,EE370
Jan 2018-Apr 2018	57	CS657,CS220,CS251

**Skills**

- Programming Languages : C, C++, Java, Python, Bash , $\text{\LaTeX}$
- Softwares/Libraries : ROS , Matlab ,OpenCV, Eclipse, SolidWorks.

**Projects**

1. **Obstacle Avoidance using a new selective strategy** : Aimed to improve the robot-navigation guidance strategy of Pioneer-P3DX through a vision-based selective approach The approach was to compare the optical flow of the centre with a suitable threshold value and then selectively tune the guidance in order to differentiate between the case of symmetry of obstacles from the case of a free field .
2. **Autonomous Chess Playing Robot**: Aim was to make an intelligent robot that can play Grandmaster -level chess using MiniMax algorithm. Designed and fabricated the arm of the robot in SolidWorks using principles of inverse kinematics in accordance with the available motor specifications and finally simulated the design (URDF format) using Ros-Moveit Assistant.

**Awards and Achievements**

- Secured All India Rank -940 in JEE 2015

- Received KVPY Fellowship with an AIR of 808 among 1 Lakh students
- Awarded Certificate of Merit in 15<sup>th</sup> National Science Olympiad
- Awarded Academic Excellence Award for outstanding academic performance in year 2015-16
- Awarded Certificate of Merit from CBSE for having secured a CGPA of 10.0/10.0 in matriculation.

**Extra-curricular activities**

- **Student Guide** and **Academic Mentor** in Counselling Service, IIT Kanpur - guided personally a group of six freshmen in their initial period of arrival.
- Participated in Chess competitions in Udgosh -annual sports festival of IIT Kanpur.
- Actively participate in Bhaktivedanta Group where study of Bhagavad Gita and other vedic scriptures take place regularly.