

# Kuldeep Kumar

3rd Year Undergraduate  
Department of Mechanical Engineering

Email : kuldpkr@iitk.ac.in  
Phone : +91-8738030515

## Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2018 - Present	B. Tech	Indian Institute of Technology Kanpur	8.1/10
2017	CBSE(XII)	J P Public Academy Kasganj	92.6%
2015	CBSE(X)	J P Public Academy Kasganj	10/10

## Scholastic Achievements

- Awarded **A\*** grade for an outstanding performance in the course **Complex Variables** (MSO 202A) in the semester 2019-20 (II)
- Secured **All India Rank 3104** in **JEE Main 2018** (Joint Entrance Examination Main) among 13 lakh candidates
- Secured **All India Rank 3946** in **JEE Advanced 2018** (Joint Entrance Examination Advanced) among 2.25 Lakh candidates
- Secured **All India Rank 171** in **NSTSE** (National Science Talent Search Examination) organised by Unified Council in 2013
- Secured **3rd** rank at National Level in the 3rd National Level Competition of **Jigsaw Wizard** in 2011

## Key Projects

- Basic Competitive Programming** May'20-Jul'20  
Programming Club, IIT Kanpur
  - A learning project which involved study as well as implementation of various algorithms and data structures
  - Regular participation in online contests along with extensive study and assignments solving were carried out
  - Among many topics covered **STL, Graph Theory, Dynamic Programming, Divide and Conquer** are a few
- Marble Run Machine** July'19-Nov'19  
Course Project: TA 201A - Manufacturing Processes-I by Prof. Anish Upadhyaya
  - Designed the CAD model and manufactured the marble run machine in a team of 6 students in 6 weeks time
  - Built the key part of the project, a spiral-threaded rod which increases the potential energy of the marbles
  - Learnt and applied various manufacturing techniques including **Welding, Sheet Metal Forming, Brazing, and Soldering**
- Brain Interfacing Robotic Arm** May'19-July'19  
Robotics Club, IIT Kanpur
  - Built a robotic arm controlled by electric signals from the brain working in a team of 6 members
  - Gained hands-on experience in MATLAB, Arduino, Inventor and wrote code for simulation of the arm on MATLAB
  - Secured **Best Project under Robotics Club** award by Science and Technology Council, IIT Kanpur
- DIC's Terrace Farming Robot** Nov'19-Dec'19  
Inter IIT Tech Meet 8.0
  - Worked on designing and manufacturing of a robot capable of climbing, ploughing, seeding and harvesting
  - Secured **Bronze Medal** among twenty one competing IITs in **Inter IIT Tech Meet 8.0** held at IIT Roorkee

## Technical Skills

- Programming Languages:** C, C++, Python, HTML, CSS
- Software and Utilities:** MATLAB,  $\text{\LaTeX}$ , Github, MS-Excel, Autodesk Inventor, AutoCad Mechanical

## Positions of Responsibility

- Secretary, Robotics Club, IIT Kanpur** Jul'19-Apr'20
  - Mentored first year students during **Robotricks**, an inter hall competition organised during Takneek
  - Prepared the content for lectures of the workshop like slides and assignments to teach freshmen new skills like programming
- Academic Mentor, Counselling Service Team** July'19-Apr'20
  - Guided and mentored several freshmen students in the first year mathematics courses MTH 101A/MTH 102A
  - Conducted hall level doubt clearing sessions and institute level academic classes for the freshers batch regularly

## Relevant Courses

Fundamentals of Computing Real Analysis Introduction to Electronics Algorithmic Toolbox* Data Structures*	Linear Algebra and ODE Partial Differential Equations Introduction to Economics Introduction to Discrete Mathematics for Computer Science* Algorithms on Graphs*
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(\*Online Course on Coursera)

## Extra-Curricular Activities

- Trained as NCC (National Cadet Corps) for one year during the freshmen year
- Received an honourable mention in All India Essay Writing Event 2015 organised by Shri Ram Chandra Mission and United Nations Information Centre for India and Bhutan
- Participated and secured Rank 1 in various district and city level general knowledge competitions in middle school