

Akash Birthal

3rd Year Undergraduate

Department of Mechanical Engineering,
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Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2020 - Present	B.Tech	Indian Institute of Technology, Kanpur	6.64/10
2019	CBSE(XII)	Shri Krishna Sr. Sec. School, Mahendergarh, Haryana	96.6%
2017	HBSE(X)	Adarsh Senior Secondary School, Bhiwani, Haryana	97.0%

Scholastic Achievements

- Secured **All India Rank 6308** in JEE Advanced 2020 among the 1.2 Lakh shortlisted candidates.
- Secured an **All India Rank 9513** in JEE Mains 2020 among 12 lakh candidates.
- Secured a position among **0.1%** of total candidates in class X Examination conducted by Board in 2017.

Projects

- Algo-101x : Stamatics Society, IIT Kanpur** *(Apr 2022 -July 2022)*
 - Focused on the analysis and construction of different algorithms for efficient solving of problems.
 - Learned various major topics like hashing and dynamic programming along with their implementation.
 - Learned bitmask basics and tricks, Knapsack problem and Polarization problem along with their variations.
 - Participated in coding contests and mashups of problems given by the mentors along with detailed discussion.
- Designed Robotic Hand : TA202A Course Project** *(May 2021 -Aug 2021)*
 - Worked with a team of 8 students to design a working model of Robotic Hand for industrial use.
 - Learnt implementation of secondary mechanical process and selecting appropriate material for individual parts.
 - Learnt Fusion 360 software and used it to design and assemble prototype of components of the project.
- Online Self Projects**
 - ☞ Linear Regression with NumPy and Python.
 - ☞ Tic Tac Toe game built using HTML/JavaScript/CSS.
 - ☞ Designed various components using Fusion 360.

Technical Skills

- Software:** Micro-Cap, Fusion 360, Git.
- Libraries & Languages:** C/C++, Python, NumPy, Pandas, MATLAB, Matplotlib.
- Web Development:** HTML5, CSS, Javascript, ReactJs, Node.js.

Relevant Courses

Engineering Graphics	Linear Algebra and Differential Equations
Engineering Drawing and Graphics	Mechanics of Solids
Manufacturing Science and Technology	Advance Mechanics of Solids
Internal Combustion Engines	Alternate Fuels and Advances in IC Engines*(ongoing)

Key Course

- ME359A: Internal Combustion Engines** *(Aug 2022 -Nov 2022)*
Instructor : **Prof. Avinash Kumar Agarwal**
 - Learnt about Fuel-Air cycles, Fuel chemistry and characteristics in SI & CI engines.
 - Learnt about Fuel Injection systems, Carburetion systems, Engine lubrication & cooling.
 - Learnt about Engine testing & Performances, Supercharging & Turbocharging.
 - Learnt about Combustion modeling in SI & CI engines, etc.

Extracurricular Activitiess

- Yellow Belt in Taekwondo.
- Participated in various competitions on Codechef and Codeforces.
- Participated in various Chess tournaments like Aagaz-20, etc.