

Aditya Goyal

3rd Year Undergraduate

Department of Biological Sciences And Bioengineering

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Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2019 - Present	B.Tech	Indian Institute of Technology, Kanpur	7.9/10
2018	CBSE(XII)	Shri Krishna Public School, Indore	84%
2016	MPBSE(X)	Kolping Convent School, Maksi	92%

Scholastic Achievements

- Secured **All India Rank 5768** in **JEE Advanced 2019** among the 1.5 Lakh shortlisted candidates.
- Among the **top 0.7%** of the 1.5 million applicants in JEE Mains 2019.

Key Projects

- Bicycle Model Design and Reverse Engineered Aircraft** (June'21- July'21)
Mentor: Prof. Gouthama, Department of Materials Science and Engineering.
 - Designed the **CAD** model of Bicycle and reverse engineered aircraft based on the manufacturing processes used.
 - Submitted **Machine Drawings** made in **AutoCad Inventor** for execution of 2D design to a working 3D model.
 - Successfully showed the implementation of **intricate manufacturing process** for complete fabrication of Bicycle from scratch.
- Virtual Cube Solver** (May'21-July'21)
Speed Cubing Club, Science and Technology Council, IITK.
 - Learned and worked on **Cube Theory** for designing Virtual Cube Solver by using optimal number of possible moves.
 - Worked on **Thistlethwaite's Algorithm** and implemented the algorithm for solving rubick's cube by the use **BFS** and **implementation of Doubly-ended BFS algorithm**.
 - Learned about **Korf's Algorithm** for finding Optimal Solutions to Rubik's Cube Using **Pattern Databases** for solving any scrambled cube in 20 moves or fewer by using an **iterative-deepening depth-first search**.
- Creating Game Theoretic Models to analyze Biodiversity Conservation Problems** (Nov'20-Dec'20)
Mentor: Prof. Swaparva Nath, Department of Computer Science And Engineering.
 - Analyzed** three different Bio-diversity problems through separate **Normal Form Games** and inferred results from **Nash Equilibrium** present in them.
 - Created Formal Models** of the three Biodiversity Problems after considering different agents and their motives.
 - Worked on the three problems to the find **optimal strategic solutions** for implementation.

Technical Skills

- Programming Languages:** C, C++, HTML, L^AT_EX, MATLAB
- Software and Libraries:** GNU Octave, Git, AutoCad

Positions of Responsibility

- Secretary, Skating Club, Games and sports Council, IITK** (2020-21)
 - Represented the club and its activities to the incoming batch of students in GnS Orientation.
 - Coordinated with the other members of the Club in proper management of Club activities.

Relevant Courses

Fundamentals of Computing Introduction to Electronics Probability and Statistics	Linear algebra and Differential Equations Introduction to Game Theory And Mechanism Design Thermodynamics
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Extra-Curricular Activities

- Volunteered in **Udghosh'19** as a junior executive of Hospitality and helped in the proper management of teams coming from other Institutes for participation.
- Volunteered in **Antaragni'19** as a junior executive of Security team for the management of fest activities.
- Trained as NCC cadet under the NCC camp of the Institute and attended multiple talks on leadership by the incoming guest speakers.