

# DHARA SHARMA

3rd Year Undergraduate  
Department of Mechanical Engineering

Email : dharash20@iitk.ac.in

Phone : +91-6350144366

## Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2020 - Present	B.Tech	Indian Institute of Technology Kanpur	7.1/10
2019	CBSE(XII)	Shivalik Children's Academy, Padampur	91.6%
2017	CBSE(X)	Shivalik Children's Academy, Padampur	10/10

## Scholastic Achievements

- Secured **All India Rank 4991** in **JEE Advanced 2020** among 0.25 million shortlisted candidates.
- Secured **99.24** percentile in Joint Entrance Examination Main 2020 among 1.2 million aspirants
- Selected among **top 50** in TATA Steel Women of Mettle in which **50+ colleges** participated and **950+ girls** registered nationwide

## Work Experience

- TATA Steel - Reliability Improvement at CGL2 SPM** (June'22- July'22)  
**Mentor:** Malay Choudhary, Head of Mechanical Maintenance - CRM(TATA Steel)
  - Acquired knowledge of steel production, working of **Skin Pass mill** to improve the roughness, in **Continuous Galvanized Line**
  - Worked on the issue of reliability and integrity of Skin Pass mill by finding and analyzing methods such that gap zeroing in it can be done without sheet cutting and pinching in the sheets can be reduced

## Key Projects

- Development of a computational framework to study the dynamics of dislocations subjected to an externally applied stress field - Mentor: Prof. Ushasi Roy**, Department of Mechanical Engineering **link** (May'22- July'22)
  - Learnt to solve problems on **MATLAB** which primarily involved solving and analyzing **Ordinary Differential Equations**
  - Developed a computational framework in MATLAB to simulate the **dislocation motion** in a two-dimensional micro structure
  - Incorporated the effect of force fields on walls of dislocation and effect of external stress fields on it's evolution at mesoscale level
- Summer of Software - Aeromodelling Club**, IIT Kanpur (May'22- Jul'22)
  - Got familiarized with three Software related to aeromodelling i.e., **AutoDesk Fusion360, MATLAB, Simulink**
  - Worked on the assignments that were provided by mentors, which included use of multiple software to have better idea of them
- Fabrication of Bike - Course Project**, TA201 (Oct'21-Nov'21)
  - Designed a bike using nuts, bolts, metal sheets, metal wires, metal rods
  - learned different processes of manufacturing like cutting, joining, metal forming, adhesive joining, metal forming
  - Designed a CAD model of bike and drew an isometric drawing of the bike
- Algo101x - Stamatics**, IIT Kanpur (May'22- Jul'22)
  - Conceptualized algorithm based techniques of **hashing, prime factorization, gcd, DP, matrix exponentiation**
  - Participated in practice competitive programming contests put up by the project mentors and solved **20+ algorithmic problems**

## Technical Skills

- Programming Skills:** C, C++, DSA, Python
- Software:** Micro-Cap, MATLAB, Simulink, Fusion360, Blender
- Web Development:** HTML5, CSS3, Bootstrap, JavaScript

## Positions of Responsibility

- SENIOR EXECUTIVE TECHKRITI (TOSC and Show Management)** (2021-2022)
  - Coordinated with different schools as a representative of IIT Kanpur and managed the conduction of exam, workshops, and various events for **8000+** students
  - Developed leadership and fellowship qualities by leading a team of about **20+** students and working under seniors
  - Managed to conduct a successful fest which included various technical, fun events for about **5000+** students
- FINE ARTS Secretary, ANTARAGINI** (Mar'22-April'22)
  - Worked under the guidance of seniors and did databasing for collecting data of different companies, art galleries, etc. and convinced them for their involvement in the fest
  - Worked to ensure management of participation of about **500+** students and conduction of competitions for them efficiently

## Relevant Courses

\* A

Mechanics of Solids Thermodynamics Engineering Design and Graphics* Linear Algebra and differential equations Introduction to Electronics Fundamentals of Computing	Fluids Mechanics Dynamics Nature and Properties of material Complex variables Introduction to Electrical Engineering Partial Differential Equations
--	--

## Extra-Curricular Activities

- Volunteer, Student Placement Office** (Nov'21-Dec'21)
  - Managed logistics of shortlisting tests, interviews for the recruiting process
  - Handled recruitment process of companies like Tata Projects, Swiss Re, MasterCard
- EXPRTO** (2020-2022)

- Mentored and guided **100+** students in their JEE preparation both emotionally and academically
- Coordinated with expro team and organized many informative sessions and webinars for students
- **Salamis Abacus**
  - Achieved **first position** at **National level Abacus Competition** through Salamis Abacus Franchise by solving algebric problems  
(2020-present)
- **Bhaktivedanta Club**
  - Learned about Krishna Conciousness and taught some students about this and and helped in their education