# SONAL RAJ

**Indian Institute of Technology, Jodhpur**

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## EXPERIENCE

### Financial Marketing Internship- trainee
**MY F&O SCHOOL**

📅 May 2024 – July 2024    📍 Remote

- Got an introduction to the financial and investment markets.
- Worked on the concepts of portfolio management and risk management

## PROJECTS

### Data-Driven-Fluid-Mechanics-Project 🔗
**Course Project**

📅 February 2023 – March 2023

- This project introduces a fluid dynamics image processing framework, using Proper Orthogonal Decomposition (POD) and noise simulation techniques to analyze video data, providing a robust toolkit for understanding fluid flow behaviour.
- *OpenCV, SVD, Gaussian & Speckle Noise, Gaussian Blur & NLM Deblurring*

### SFD & BMD Plotting website 🔗
**Course Project**

📅 October 2023 – November 2023

- Developed a flexible algorithm to analyze shear force and bending moment in rods under changing forces and positions, accommodating various inputs and support configurations.
- *SFD & BMD Concept, HTML, CSS, JavaScript, Chart.js*

### S.P.A.R.K.- Automatic Minesweeper Solver 🔗
**Course Project**

📅 March 2023 – April 2023

- A dynamic user interface was used along with an unusual method to develop an innovative Minesweeper mine probability suggester that displays the probability of a mine as a percentage of neighbouring unopened cells and provides continuous feedback.
- *Python*

### E-Kart online E-Commerce Website 🔗
**Self Learning Project**

📅 June 2024

- Developed a fully functional e-commerce web application using Django, featuring user registration and authentication, a dynamic product catalogue, shopping cart, secure checkout, and order management. Integrated admin interface for managing products, orders, and users.
- *HTML5, CSS3, JavaScript, Django*

## EDUCATION

### B.Tech in Mechanical Engineering
**IIT Jodhpur**

📅 October 2022 – Present    CGPA:7.54

### Class XII
**S.M.S.G College Sherghati, Bihar**

📅 March 2021    BSEB – 83.00%

### Class X
**D.A.V Public School Sherghati, Bihar**

📅 May 2019    CBSE – 92.00%

## SKILLS

- **Programming:** Python, C/C++, MATLAB, HTML, CSS, JavaScript
- **Software:** LaTeX, SolidWorks, OnShape
- **ML Libraries:** NumPy, Pandas, SkLearn, OpenCV
- **Utilities:** Git, GitHub, Jupyter & Google Colab
- **Web Frameworks:** Django, Flask

## COURSEWORK

- Data Structures and Algorithms
- Introduction to Machine Learning
- Introduction to Computer Science
- Scientific Computation
- Engineering Mathematics I & II
- Signals and Systems

## POSITION OF RESPONSIBILITY

- Complaint Resolution Team, Dining Committee IIT Jodhpur
- Designing Head, Newsletter Club(Pheme) IIT Jodhpur

## ACHIEVEMENTS

- Qualified Jee Mains & Jee Advanced