# Aadarsh Shaw
4th Year Undergraduate

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## Academic Qualifications

| Year | Degree/Certificate | Institute | CPI/% |
|---|---|---|---|
| 2020 - 2024 | B.Tech (Mechanical Engineering) | Indian Institute of Technology, Kanpur | 9.0/10 |
| 2019 | ISC(XII) | St. Joseph's College, Kolkata | 96.25% |
| 2017 | ICSE(X) | St. Joseph's College, Kolkata | 91.8% |

## Scholastic Achievements

- Received the **Academic Excellence Award** for the year 2020-2021 for **exceptional** academic performance
- Granted a branch change to **Mechanical Engineering** owing to **excellent** academic performance
- Secured **10/10 SPI** in the 2nd semester at IIT Kanpur.
- Achieved **All India Rank 6337** in **JEE Advanced, 2020** among the 0.12 million shortlisted candidates

## Work Experience

**Vaultedge Software** | Data Science Intern *(May'23 - July'23)*

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|---|---|
| **Objective** | • Optimization of the inference time of a pytorch transformer model<br>• Develop a model to detect the **relevant signatures** present in a given document |
| **Approach** | • Used the **optimum library** along with **onnx-runtime** to optimize inference time of RoBERTa<br>• Obtained an improvement of **3.5x** over the base inference time of 2hrs for **2500 pages**<br>• Worked with the annotation team to create a dataset with relevant signatues using **Label Studio**<br>• Yolov7 model was fine-tuned on the dataset in order to attain a **mAP of 0.94** on the test set. |
| **Impact** | • The optimization led to a **decrease** in the costs that the company incurred for cloud computing.<br>• The signature detection model was **deployed in production** and integrated with the workflow |

**Industry 4.0** | Prof. Nalinaksh S. Vyas | Summer Intern *(May'22 - April'23)*

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| **Objective** | • Simulate and implement **Industry 4.0** in factory |
| **Approach** | • Designed a **scheduling algorithm** in **Python** which optimizes the production of railway coaches<br>• Wrote a **REST API** in **NodeJs** for an android app which logs user data and location and provides them to an administrator **real-time** to keep track of employees and their work timings<br>• Implemented **Real-Time-Machine-Monitoring** for Siemens 840D sl lathe machines, by researching relevant tags and obtaining data through **NIOPC UA** servers on **LabView** |
| **Impact** | • The implementation boosts the **factory productivity**, eases **machine monitoring and maintenance** and ensures **timely completion** of orders as per the stipulated deadlines |

## Projects

### Estimation of Time of Arrival *(May'22-July'22)*

**Mentor: Prof. Tushar Sandhan** | Dept. of Electrical Engineering

- Analysed several research papers to grasp the problem statement, solution approach, and future enhancements
- Utilized of the **OSRM API** to locate the least distance path between the specified start and end points
- Implemented the **SOTA Wide-Deep-Recurrent (WDR)** model to estimate the time of arrival

### Recruitment Automation System *(May'22-July'22)*

**Students' Placement Office** | Frontend Developer

- Worked on a new Recruitment Automation System for use in IIT Kanpur by over **500 companies** and **1700** students in the upcoming placement and internship drives each year to automate the recruitment process
- Used **NextJs** to make the different pages of the portal, each with **data filtering** and **notification prompts**
- Utilized the **Material UI (MUI)** library to give the pages a **modern look** and **consistent theme**

## Technical Skills

- **Programming Languages:** C/C++, Java, Javascript, LaTeX, MATLAB, Python
- **Software and Libraries:** Git, NextJs, NodeJs, ReactJs, Micro-Cap, LabView

## Relevant Courses

| | |
|---|---|
| Fundamentals of Computing | Introduction to Electronics |
| Linear Algebra and Differential Equations | Introduction to Machine Learning |
| Introduction to Electrical Engineering | Engineering Design and Graphics |