



Arpit Tiwari

Mechanical Engineering

Artificial Intelligence and Data Science

Computer Science and Engineering

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190110011

B.Tech

M.Tech

Minor

DOB : 10/13/1999

Examination	University	Institute	Year	CPI/%
Graduation	IIT Bombay	IIT Bombay	2019-24	8.77

Awarded Branch change to Mechanical (among 29 students) | 98.52 percentile JEE Advance | AIR 1312 in JEE Mains

PROFESSIONAL EXPERIENCE

Hilti Technology Solutions India | Software Development Intern [May'22 - July'22]

Technical Project : Worked on making a user-based Dashboard for managing business personas using **ReactJS** library

- Accompanied charting libraries like **React-chartsjs** and **Nivo**, for displaying the critical attributes of the job sites
- Successfully made a **customisable** dashboard having pivot table-based features using the **react-pivortable** library

Analysis Project : Comparative analysis of various **asset management solutions** available in the construction industry

- Generated a **comparative analysis report** based on the features of products of the top 5 competitors in the market
- Shadowed** different software roles like **Developer**, **Scrum master**, **Quality Assurance**, **DevOps engineer**, and **PO**

Obbserv Online Services Pvt. Ltd. | Data Analysis Intern [May'21 - July'21]

- Analysed the acquired market store and website data of various clients using **Google Analytics** and **Data Studio**
- Worked on improving various **KPI's** (Key Performance Indicators) by analysing companies market store website data from **google analytics** and visualising data using **Tableau** and **Python** to extract further meaningful inferences

KEY PROJECTS

Image Processing for Detection of Casting Defects | Course Project [Mar'21 - May'21]

- Built a binary classifier using **LeNet CNN** architecture with **Adam** optimizer and **binary cross entropy** as the loss function with **ReLU** as the activation function for training the classifier model to detect the moulds casting defects
- Successfully detected the location of the mould defects, implementing **YOLOv3**, a pre-trained object detection model
- Achieved an accuracy of over **95%** for the detection of defects and an accuracy of **99%** for detecting their location

Project Management using NLP and Operations Research | Course Project [Jan'22 - May'22]

- Worked on the automatic **software issues allocation** problem among the developers, maximising the task efficiency
- Preprocessed the issue allocation data using **NLP** and extracted features using **one-hot** and **Word2-vec** encoding
- Implemented ML models like **Naïve Bayes**, **SVM**, and **Neural Networks**, thereby generating the similarity matrix
- Optimized the issue allocation problem solving the **linear assignment problem (LAP)** using **CPLEX** solver in **AMPL**

Movie Recommendation and Rating system | Course Project [Mar'21 - May'21]

- Built a movie rating prediction system using **SVD** (Singular Value Decomposition) from **surprise library** in python and using multiple **Linear regression** models like **XGBoost**, **Ridge Regression** to further improve the accuracy
- Worked on building a Movie recommender using **K-nearest neighbour** with **cosine distance** metric in **scikit-learn**

Stocks Price movements prediction using Machine learning | Finance Club [May'21 - July'21]

- Forecasted stocks prices of **RELIANCE** time series stocks dataset extracted using **nsepy** library in python language
- Implemented the **ARIMA** model on the **non-stationary** time series stocks dataset to forecast the future stocks prices
- Applied an **LSTM** networks-based model using **60-day** look-back period to forecast the stocks prices for two years

Miscellaneous Projects : Image Inpainting | Image Denoising | Pan-sharpening | Parellel Google Page rank algorithm

POSITIONS OF RESPONSIBILITY

Department Academic Mentor | **Student Mentorship Program (SMP)** [June'21 - June'22]

Part of a 39-member team selected out of 135+ applicants on the basis of performance in extensive interviews and peer reviews

- Mentored a group of **8 sophomores** in the mechanical department, providing academic support and general counsel
- Acting as the first point of contact in order to actively bridge the gap between faculty and students in the department

Maintenance Secretary | **Hostel 9, IIT Bombay** [Sept'20 - May'21]

Part of a 3-tier team selected on the basis of interviews catering to 400+ students, responsible for general maintenance of the hostel

- Managed a Hostel budget of **6.75 lakhs** for maintenance, equipment, and infrastructural developments in the hostel

EXTRACURRICULAR ACTIVITIES

Sports	<ul style="list-style-type: none">Member of Cricket General Championship team that represented Hostel 16 [2020]Yearlong training in cricket offered by the National Sports Organization (NSO) [2019-20]
Miscellaneous	<ul style="list-style-type: none">Worked as a Competitions & Live Your Passion Coordinator at 50th Mood Indigo [2020]
Skills	<ul style="list-style-type: none">Software : Python, SQL, C++, MATLAB, HTML, CSS, JavaScript, ReactJs, LaTeX, CADProgramming : TensorFlow, Keras, OpenCV, Scikit, Jupyter Notebook, SolidWorks