



## EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2023	B.TECH	IIT Kharagpur	8.63 / 10
2018	Senior Secondary Examination	K.V. FRI	89%
2016	All India Secondary School Examination	The Asian School	9.2 / 10

## INTERSHIPS

### Engineering Development Group Intern | Mathworks Inc.

[May 22 - July 22]

*Developed a workflow wizard application for Simulink Design Verifier (SLDV)*

- Created the app using **MATLAB** and **C++** which assisted new users in seamless navigation through SLDV
- Collaborated with the **U.S. team (head office)** for the implementation of parallel architecture in MATLAB processes
- Improved the process handler by writing **unittest** files for bug detection and suggested considerable fixes for it
- Implemented the missing feature of **automated verification** for Task Queues and Streams for multi consumers
- Contributed in the **company-wide bash** by discovering and reporting bugs in the pre-release of **MATLAB R2022b**

## PROJECTS

### Review Helpfulness Prediction | Prof. Sujoy Bhattacharya, IIT Kharagpur

[Aug 22 - Present]

*Analyzing the factors that determine the number of helpfulness votes a review receives*

- Scraped more than 10000+ reviews from top websites using **Beautiful Soup** and **Selenium** packages in python.
- Feature engineering done by removing stopwords, lemmatization and EDA using python libraries like **NLTK**
- Built **ensemble modes** to predict on different combinations of characteristics of the data points and compare them

### Natours - Online tour bookings

[Apr 21 - June 21]

*Developed an API for a tour booking web app using NodeJs*

- Implemented a user **authentication** and **authorization** system using JWTs to handle user's access to routes
- Enhanced API routes protection by setting **rate limiting**, security HTTP headers and **data sanitization**
- Worked with **different data types on MongoDB**, including geoJson data for geospatial queries and aggregation

### C++ Big Integer Library

[Jan 22 - Feb 22]

*Created a library in C++ to handle very large integers upto 3000 digits*

- Designed functionality for arithematic, logical and conditional operators along with gcd, lcm and prime check.
- Implemented various algorithms such as Euclid's Algorithm, **Sieve of Eratosthenes** and Binary Exponentiation

## COMPETITION/CONFERENCE

- Completed all 5 levels of **Foobar**, a secret algorithmic challenge by **Google**, learning new algorithmic concepts
- Secured **Global Rank 698\*** in Google **Kickstart** Round E (2022) out of 10000+ participants
- Selected in Amazon ML Summer School 2022 learning practical industry applications through Amazon Scientists
- Achieved a peak rating of **1667** on **Codeforces** and **1581\*** on **Leetcode**
- Achieved ranks of **416** and **771** in Codeforces **Round 693 (Div.3)** and **714 (Div.2)**

## SKILLS AND EXPERTISE

**Languages:** C++ | Python | Javascript | HTML | CSS | MATLAB

**Libraries & Softwares:** C++ STL | Numpy | Pandas | skLearn | NLTK

## COURSEWORK INFORMATION

Programming &Data Structures | Algorithms 1\* | Probability &Statistics\* | Linear Algebra | Transform Calculus | Machine Learning | Applied Text Mining\* | Control Systems | Differential and Integral Calculus

## CERTIFICATIONS

### Applied Text Mining in Python | Coursera & Univ. of Michigan

- Developed familiarity with text mining and manipulation techniques including regular expression and nltk framework
- Explored advanced methods for detecting topics in documents and grouping them by similarity (topic modelling)

## AWARDS AND ACHIEVEMENTS

- Among the **top 10%** of 1500+ students awarded a branch change for outstanding performance in the first year.
- Secured a rank under top **2%** among **1.2 million** candidates in **JEE Mains**
- Secured a rank under top **5%** among **250000** candidates in **JEE Advanced**

## EXTRA CURRICULAR ACTIVITIES

- Part of the Inter-Hall **Quiz Team** securing **4th position** representing Madan Mohan Malviya Hall of Residence
- Successfully completed a 5km marathon organized under NSO (Health &Fitness)