

Shirsha Chowdhury

Major: Electrical Engineering
Minor: Computer Science Engineering

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EDUCATION

B.Tech

Indian Institute of Technology, Kharagpur

July 2018 - May 2022

CGPA: 9.25

12th | CBSE

South Point High School

April 2018

Percentage: 94.8%

10th | CBSE

South Point High School

April 2016

CGPA: 10

INTERNSHIP

Software Development Engineer

Mastercard

May 2021 – July 2021

Tasks

- Implemented the idea of **Microfrontend** to make a web application in **Single Spa** framework of Node JS which supports various javascript frameworks among the different Micro Applications. Each Micro Application had separate backends.
- The Root application had the feature in which multiple Micro Applications could communicate with each other and share relevant data.
- Added translations using the **Microsoft Azure Service** and **NGX translate feature** of **Angular framework** in the Customer Service website.
- Made a **Command Line Tool** in **Node JS**, which facilitates creating and updating the latest Spring Boot application starter files.

SKILLS AND EXPERTISE

Languages:

C | C++ | Python | JavaScript | TypeScript | MATLAB | Octave | Assembly Language

Web Development Technologies

HTML 5 | CSS 3 | Bootstrap | JQuery | React | Angular | Node JS | Express | REST API

Machine Learning Frameworks in Python

Scikit-learn | Scipy | TensorFlow | Pytorch | Transformers | Numpy | Pandas | Matplotlib | Seaborn

Database:

SQL | MongoDB | Redis

PROJECTS

Media Bias Prediction From User Sentiments in Twitter

- Aimed to predict the political inclination of news channels using retweets and corresponding metadata as a proxy measure for political bias.
- Collected retweeters' data of extreme media channels, encoded them using **Sentence-BERT** and labelled them as liberal or conservative.
- Implemented a Neural Network model for **73.2%** accuracy, analysed tweets data for different news channels and predicted bias using it.
- Obtained a bias distribution very similar to the app **Media Bias Monitor**, used to measure political bias in Facebook media pages.

Chat Application

- Made a small-scale multi-user chat application that uses RSA based **end-to-end** encryption and features **passwordless** login.
- The backend is based on **Express JS**, which manages incoming socket connections and implements a **REST API** for managing clients.
- For data persistence, the application uses **Redis**, an in-memory data structure store and **React** was used to design the Frontend.

Sudoku Solver and Visualizer

- Implemented **Backtracking** Algorithm to solve Sudoku.
- A gaming Interface and complete visualization of the backtracking algorithm was created using the **pygame** framework.

COMPETITIONS

- Achieved a Rank of **613** among 7000 global participants in Google Kickstart Round E 2021.
- Finalist of Overnite Kshitij IIT Kharagpur, a ACM certified team competitive programming contest.
- Qualified for Facebook Hacker Cup - Round 2, 2021.
- Won Silver in Inter IIT Data Analytics competition.

ACHIEVEMENTS

- Expert with max rating of **1615** on Codeforces (id : [shirsha](#)).
- 4 star with max rating of **1845** Codechef (id : [zidane07_09](#)).
- Achieved Department Change in First Year, owing to being among the top **5%** students of the batch.
- Secured All India Rank among top **0.62%** in JEE Main 2018 and All India Rank among top **1.83%** in JEE Advanced 2018.