

# AYUSH LAWARE

Nagpur, Maharashtra

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Ayush Laware

musicness

## EDUCATION

IIT Kharagpur

2022 – 2026

Degree - B.Tech(hons) Biotechnology

Kharagpur, West Bengal

## COURSEWORK / SKILLS

- Data Structures & Algorithms
- Networks
- Artificial Intelligence
- Web Development
- Operating Systems
- Database Management System (DBMS)
- OOPS Concept
- Data Science

## PROJECTS

### RAG Based Multisource Engine

OCT'24-NOV'24

- Created a multisource RAG engine by developing **wrappers** for **wikipedia**, **ArXiv**, **Langsmith** resources
- Integrated toolkit with **OpenAI LLM** using **langchain** tool to create an efficient retrieval based search engine
- Applied **langchain hub** for **prompt management** and the **agent executor** for calling the retrieval queries

### Cybersecurity Attack Classification

MAR'24-APR'24

- Successfully implemented a binary classification to predict **DDos** attack types using **100k+** sample points
- Encoded the categorical data using **onehot**, **original encoding** methods, and used the **MinMaxScaler**
- Explored **Logistic Regression**, **Random forest**, **Neural Networks**, choosing on the basis of **recall** score
- Achieved a **recall score** of **0.99** on the validation dataset, and 0.81 on the **test dataset** showing overfitting

### Vehicle Routing Problem

SEP'24-OCT'24

- Developed an optimized solution for the Vehicle Routing Problem using the **genetic algorithms** using **NSP**
- Utilized the **DEAP** library for evolutionary computation, exploring it to solve the maze solver pre-application
- Crafted the **fitness evaluation function** for the vehicle routing problem, showcasing **analytical-skillset**

## HACKATHON

### Rubik's Cube Solver | Algozenith Hackathon

OCT'24-NOV'24

- Modeled a virtual **Rubik's Cube(3x3)** in **3** different models using standard **data structures** present in **c++**
- Achieved a solving time under **3** seconds for a Rubik's cube jumbled 3 times using **BFS, DFS & IDDFS**
- Implemented **Korf's IDA\*** algorithm, achieving solving time under **10** seconds for a cube jumbled **13** times

### DSA Based Search Engine | Algozenith Hackathon

MAR'24-APR'24

- Implemented a web app using **nodejs** for users to search and retrieve relevant questions from leetcode website
- Scrapped questions from the LeetCode website using the **Selenium Webdriver & BeautifulSoup** libraries
- Developed the **TFIDF** (Term Frequency-Inverse Document Frequency) algorithm for efficient search response

### AI-Powered Coding Assistant | Algozenith Hackathon

SEP'24-OCT'24

- Developed a **Context-Aware Chrome Extension**, Integrated AI-powered assistance using **OpenAI LLM**
- Created and successfully implemented the **UI** using **JS, HTML, and CSS** for 'AI Help' button in the **SPA**
- Optimized **AI prompts** to deliver highly accurate responses and added advanced features like **chat history**

## TECHNICAL SKILLS

**Languages:** Python, Java, C, C++, C#, Dart, JavaScript, SQL, NoSQL, R, XML, Go, HTML, CSS, Javascript  
**Developer Tools:** VS Code, Android Studio, DataGrip, Goland, IntelliJ Idea Ultimate, Github, Vim code Editor  
**Technologies/Frameworks:** Linux, GitHub, ReactJS, Redux, NextJS, NodeJS, ExpressJS, Git, Mongo, Flutter

## EXTRACURRICULAR

Music Society IIT Kgp

NOV'2022–PRESENT

Guitarist

- Selected amongst **top 200** participants with the interview and performance score being rated **highest** overall
- Handled the **logistics** of five consecutive productions over a year while being an active member of the troop
- Performed electric guitar, bass guitar across various genre like metal, jazz, being recognized as best bass