

EDUCATION

Degree/Certificate	Institute/Board	Year
B.Tech.	Indian Institute of Technology, Guwahati	2020 - 24
Senior Secondary	Central Board of Secondary Education	2020
Secondary	Indian Certificate of Secondary Education	2018

PROJECTS

- TF-IDF based Problem Search Engine

Aug. '23

Personal Project

Website | Github

Implemented web scraping using Selenium and BeautifulSoup to extract problem sets from LeetCode and CSES.

Implemented the TF-IDF algorithm from scratch, calculating the TFIDF score for every word in each problem statement.

Implemented Cosine similarity to rank problems in alignment with search queries, ensuring optimal relevance.

Developed a Node.js application that accepts user queries and displays relevant problems via EJS templating.
- Rubik's Cube Solver - using Korf's IDA* Algorithm

Aug. '23 - Sep. '23

Personal Project

Korf's Research Paper | Github

Modelled a virtual Rubik's Cube (3x3) in 3 different models/classes using standard data structures present in C++.

Achieved solving a Rubik's Cube 8 times jumbled in under 3 seconds using BFS, DFS, and IDDFS algorithms.

Implemented the Korf's IDA* Algorithm, achieving a solving time of under 10 seconds for a Rubik's Cube jumbled 13 times.
- Predicting Flight Delays in India

Jul. '23

Personal Project

Github

Developed a Flight Delay prediction system, aimed at improving customer satisfaction and air-travel management.

Data was scraped from Flightradar24, the test MSE was obtained to be 0.25 with SVM and Random Forests.
- BigInteger

Feb. '23

Personal Project

Github

Created a lightweight arbitrary-sized integer class for C++ utilising Object-Oriented Programming concepts.

Supports all arithmetic, relational, assignment, input/output operations and additional functions such as lcm, gcd, etc.

Used no additional dependency except the standard c++ library.
- Crack Area Prediction of RC Slabs subjected to Blast Loading

Jul. '23 - Present

Prof. Hrishikesh Sharma, Department of Civil Engineering, IIT Guwahati

Studied several research publications to validate reinforced concrete slab models in LS-DYNA.

Developing a Deep Neural Network (DNN) to forecast crack area, utilizing multiple input parameters, including percentage reinforcement, slab dimensions, blast load, and blast height.

ACHIEVEMENTS

- Expert on Codeforces: Achieved a peak rating of 1641 on the platform (Handle - shawsk).

Codeforces Round #896: Ranked 407th globally among 26000+ participants.

Codeforces Round #889: Ranked 429th globally among 26000+ participants.

Codeforces Round #886: Ranked 603rd globally among 38000+ participants.
- Flipkart Grid 5.0: Advanced to semi-final round by securing a rank in the top 1.25% among 4 lakh candidates.
- Solved 1000+ programming problems on all coding platforms combined.
- Joint Entrance Examination '20: Secured a rank in the top 1% among 1.17 million candidates.
- Young Scientist Talent Test '18: Among the top 10 students in the state.

TECHNICAL SKILLS

Programming languages: C/C++, Python*	Web Technologies: HTML, CSS, Node.js, React*
Database Management: MySQL	Miscellaneous: NumPy*, Git
* Elementary proficiency	

KEY COURSES TAKEN

- Computer Science: Introduction to Computing, Data Structures and Algorithms, Database Management Systems and SQL, Operating Systems.
- Mathematics: Probability, Discrete Mathematics, Linear Algebra, Elementary Number Theory.

POSITIONS OF RESPONSIBILITY

- Manager, Udgam 2022, IIT Guwahati

Sep. '21 - Feb. '22

Headed a team of 12 associates in organising a highly successful Internfair with 1300+ student registrations.
- Senior Executive, E-Cell, IIT Guwahati

Apr. '21 - Apr. '22

Organised a diverse range of entrepreneurial events with a focus on effective moderation and engagement.

EXTRACURRICULAR

- Yuvaan - IITG Mars Rover (Robotics Club): Contributed to autonomous task under AI module.

2022
- Techevince '22: Devised a solution to address the campus's laundry challenges, along with a revenue model.

2022
- Startup Case Study, E-Cell: Conducted an in-depth case study on the startup 'Travel Triangle'.

2021