



Shivansh Sagar
Civil Engineering
Indian Institute of Technology Bombay

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B.Tech.
Gender: Male
DOB: 02/04/2004

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2025	8.27

PROFESSIONAL EXPERIENCE

Mechximize Digitech pvt ltd | BACKEND DEVELOPER

[May'24-Jul'24]

- Streamlined hospital appointment processes, cutting **95%** of manual tasks and significantly enhancing system efficiency
- Built robust backend using NodeJS, ExpressJS, and MongoDB for a Doctor Appointment System, supporting **three** user levels
- Implemented **multilingual** support, streamlining **UI** and navigation for non-medical staff, and strengthening overall usability

TECHNICAL PROJECTS

Algorithm Visualizer | SUMMER OF CODE | WEB AND CODING CLUB | IIT BOMBAY

[Jun'24-Aug'24]

- Designed a React-driven **Alorithm Visualizer** with 7 algorithms, enabling real-time interaction for better user engagement
- Enhanced animation performance with **requestAnimationFrame** and **Memoization**, reducing render cycles for vast data
- Optimized with **Dynamic tress** and **Flip Move Animations** to enhance performance and provide interactive vizualization

News Summarizer | SELF PROJECT

[Jan'24-Mar'24]

- Built an **AI-Powered** tool to summarize news articles, providing concise overviews with options for detailed articles reading
- Integrated **Open-AI** with **newsAPI**, designing implementing user-friendly **Streamlit** interface for real-time summarization
- Improved news consumption by providing quick, accurate summaries, reducing overload and advancing user productivity

TourMate API |SELF PROJECT

[Oct'23-Dec'23]

- Developed a scalable and secure **RESTful API** of a tour booking platform using **NodeJS**, **Express** and **MongoDB**, including **OAuth 2.0** for third party authentication, **bcrypt** for password hashing and **tour review** feature for user ratings and feedbacks
- Integrated **JWT** based authentication, role based access, and **cron jobs** for automated tasks like cleanups and notifications
- Deployed the application to **Heroku**, optimizing performance with Redis caching and ensuring seamless **CI/CD** integration

Option Pricing Model | FINSEARCH | FINANCE CLUB

[Jun'24-Aug'24]

- Created an option pricing model for Futures and Options market, incorporating various **Option Geeks** to enhance accuracy
- Implemented **Black-Scholes** and **Binomial models** to generate accurate options price forecasts for the Indian stock markets
- Obtained **85%** accuracy on **Bank Nifty** call option with the Black-Scholes model, supported by a **95%** confidence interval

Data Structures and Algorithms | CODING FIESTA 2.0

[June'23-Aug'23]

- Utilized **Heap** and **AVL** sort algorithms for sorting and **Bellman-Ford** algorithm for optimizing profitability in costing problem
- Implemented **Rabin-Karp's** algorithm for the searching patterns in a string based on polynomial hashing with $O(|T|+|P|)$ TC
- Solved **100+** applied **DSA** based questions on leetcode GfG in different time and space complexities with **80%+** accuracy

POSITIONS OF RESPONSIBILITY

Events Convener | INSTITUTE SPORTS COUNCIL

[May'24-Jul'24]

Part of a 30+ member team, selected through a rigorous interview process, complemented by thorough peer reviews

- Served as a convener and led IITB's Table Tennis team to a **Silver** medal victory in the Inter-IIT competition held in IIT Delhi
- Responsible for ideating and executing **20+** events like Sports Orientation and General Championships for **5,000+** students

SKILLS AND EXTRA-CURRICULARS

Skills	MERN, Heroku, JWT, OAuth2, Restful APIs, TensorflowJS, OpenAI, Git, Github, Streamlit
Programming	Java, Python, Vanilla Javascript, MySQL, ReactJS, NodeJS, C++, Pandas
Sports	<ul style="list-style-type: none">Led Table Tennis team as Captain at Inter IIT Sports Meet, earning Bronze Medal among IITs across IndiaSuccessfully captained the TT team to a Gold Medal at Udghosh'23, defeating 32 college teams nationwideLed the hostel team to victory in the Table Tennis GC for Hostel 2, achieving back-to-back titles as captainCompeted in the prestigious SGFI Table Tennis Tournament in Ahmedabad, facing top players nationwide
Social	<ul style="list-style-type: none">Volunteered and contributed alongside 600+ donors in Abhyuday's Blood Donation Drive at IIT BombayLed 300+ volunteers in removing 2.5 tons of garbage from Powai Lake om cleanup campaign by Abhyuday
Miscellaneous	<ul style="list-style-type: none">Built a 4-wheeled robot with obstacle avoidance, controlled by robust mobile app in the XLR8 competitionEngaged in the Gyration Dance General Championship, where the team earned a silver medal for hostel 2