

SAPRATIVA SARKAR

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Education

Birla Institute Of Technology, Mesra

Integrated M.Sc. in Mathematics and Computing

2020 – 2025

Ranchi, Jharkhand

Relevant Coursework

- Data Structures
- Machine Learning
- Algorithm Analysis
- Database Management
- Deep Learning
- Operating Systems
- Computer Networks
- OOP

Professional Contributions

Financial Portfolio Management

Data Modelling, Entity Relationship Diagram, Java, JPA

Wells Fargo

May 2024

- Figured out what data the system needed to keep track of.
- Drafted a visual representation of the data as an entity relationship diagram (ERD).
- Used the IntelliJ developer application to implement the ERD and published it to GitHub.

Retail Strategy Analysis

Data Analysis, Numpy, Pandas, Matplotlib, Sklearn

Quantium

July 2024

- Analyzed transaction and customer data to identify trends and inconsistencies.
- Developed key metrics to examine sales drivers and assess overall sales performance.
- Utilized Python for data analysis and visualization, creating impactful visual representations and structured reports using the Pyramid Principles framework.

Projects

Signboard Recognition and Text Translation System | *Python, MLFlow, Deep Learning*

July 2024

- Developed a custom dataset by writing Hindi alphabets to train the model.
- Implemented a classification technique to identify the presence of text on the signboard.
- Utilized YOLO (You Only Look Once) to detect and locate the text on the signboard.
- Applied NLP techniques to translate the detected text into the desired language.

Airline Booking System | *Java, Low-Level Design*

March 2024

- Implemented an airline booking system to manage flight schedules, bookings, and customer information.
- Applied SOLID principles to ensure robust class design, facilitating easier future extensions and modifications.
- Utilized design patterns to manage object creation and resource handling efficiently.

Banking System Management | *Python, MySQL*

March 2024

- Developed a comprehensive banking system using Python for the backend logic and MySQL for database management.
- Implemented secure and efficient database schemas to manage accounts, transactions, and customer information.
- Optimized query performance by applying best practices in database indexing and normalization.

Technical Skills

Languages: Python, Java, C, C++, SQL

Frameworks: PyTorch, YOLO, Scikit-learn

Technologies: Deep Learning, Low-Level Design, Machine Learning, Object-Oriented Programming, Computer Vision, NLP

Extracurricular

Table Tennis Achievements:

2012 – Present

National Level Player, College Team Captain

West Bengal

- Represented West Bengal in National table tennis (2018) for cadet boys. Ranked 7th in West Bengal for cadet boys in the 2017-18 season.
- College table tennis captain and organized table tennis tournaments.
- Represented the college table tennis team in sports fests at IIT Roorkee and IIT Kanpur, reaching the semifinals.