

SAPTARSHI BHATTACHARYA

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EDUCATION

B.Tech., Computer Science and Engineering, Kalyani Government Engineering College Expected June, 2024
Relevant Coursework: DBMS, Operating Systems, OOPS, Computer Networks, Pattern Recognition, etc.

GPA: 9.4

EXPERIENCE

Executive
RPSG Ventures October, 2024 – Present
Kolkata, India

- Produced and maintained CRM and billing pipelines across **5 cities, 3 states**, and **38 lakh+ consumers**.
 - Developed and deployed load-forecasting models utilizing time series analysis, achieving a **MASE of 0.80**, a **MAPE of 16%**, and **RMSE of 815**.
 - Configured **Voicebot** workflows integrated with **IVR**, and geospatial **outage detection** for 140 concurrent callers.
 - Coordinate with the Security Team to set up the **GitLab CI/CD pipelines** to be used by 30+ developers.
 - Designed and demoed an **on-prem health monitoring system** for **50+** production applications & databases.

Data Science Intern

July, 2022 - November, 2022

Hyderabad, India

- Worked on **SageMaker** pipelines to pre-process and transform data, resulting in a **16x** improvement in efficiency.
 - Scraped and analyzed **200K+** titles from **IMDB**, classifying them into **genre buckets**, which improved content tagging.
 - Set up **implicit recommender systems** serving an **OTT client with 2M+** active users, improving engagement.

Backend Intern

January, 2022 - April, 2022

Delhi, India

- Developed and maintained over **300 APIs** and curated **10000+ courses** from **100+ course providers**.
 - **Optimized** search engine algorithms and data retrieval times by almost **6x** to create a seamless user experience.
 - Designed and deployed **ML** applications to enhance text correction accuracy and provide context-aware suggestions.

PROJECTS

Parkify (Computer Vision) • YouTube

- Created an **AI-enabled parking system** using **OpenCV** and a quantized **TensorFlow OCR model** for real-time number plate recognition, achieving a **15x speedup** in inference time.
 - Developed the end-to-end **MERN stack application** with a seamless user flow for entry, allocation, and exit tracking.

Offbeat (FastAPI, Pydantic, SQLAlchemy, PostgreSQL) • Website • GitHub

- Built 100% provider-agnostic backend using **FastAPI**, **SQLAlchemy 2.0**, **Pydantic V2** with **Hexagonal Architecture**, supporting 3+ database providers and 3+ cloud storage solutions through dependency injection.
 - Implemented **JWT authentication**, **Password Hashing** deployed webservice on **Supabase PostgreSQL** and **Render**.

SKILLS AND TECHNOLOGIES

Data Science and Analytics: Jupyter Notebook, Pandas, NumPy, Matplotlib, Plotly, Tableau, MS Excel

AI/ML: Scikit-Learn, TF, PyTorch, OpenCV, CNN, RNN, LSTM, Recommendation Systems, Time Series Models, MCP

Languages: Python, JavaScript, TypeScript, Java, Solidity, Bash

Web: FastAPI, Flask, MERN, REST APIs, JWT Auth, Supabase, Websockets

DevOps and Cloud: Docker, GitHub Actions, GitLab CI/CD, AWS S3, EC2, SageMaker, Boto3, Nginx/Apache, Solaris

Databases: PostgreSQL, MySQL, MongoDB, Redis, Oracle, PL/SQL

ACHIEVEMENTS

- Secured finalist status at **Smart India Hackathon 2022** and clinched 2nd place at **Hack4Bengal 2.0**.
 - Co-authored and presented "*Nirnayaak: Revolutionizing Legal Research*" at the IEEE-sponsored **C3IT 2024** conference.