

# SAPTARSHI BHATTACHARYA

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## EDUCATION

**B.Tech., Computer Science and Engineering**, Kalyani Government Engineering College

June, 2024

Relevant Coursework: DBMS, Operating Systems, OOP, Computer Networks, Pattern Recognition, etc.

GPA: 9.32

## EXPERIENCE

**Executive**

October, 2024 – Present

**RPSG Ventures**

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

**Contelligenz**

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.

## 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.

**HomeAI MCP (MCP, Gmail API, MongoDB) • EmailMCP • CalendarMCP**

- Integrated **Model Context Protocol** servers to handle **Gmail** and **Personal Calendar** via **async JSON-RPC 2.0**.
- Implemented **email drafting**, **templating**, **sending**, and **calendar assistant** with robust tools and resource management.

**Portfolio Chat (Python, LLM, Gradio) • Hugging Face**

- Fine-tuned a **LLaMA 3.2-1B** model on personal resume & project data to build an **LLM-powered chatbot** for Q&A.
- Built a **Linux-terminal-style interface** with **Vite + React** for real-time interaction, using **Ollama** and **gradio**.

## 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** for designing scalable vehicle-parking solutions.
- Spearheaded event organization, obtained sponsorships from GitHub, and conducted technical talks for **5 student clubs across 3 campuses**.
- Co-authored and presented *“Nirnayaak: Revolutionizing Legal Research”* at the IEEE-sponsored **C3IT 2024** conference, demonstrating an **NLP system** to streamline legal document analysis and reduce judicial delays.