# SARBO SARCAR

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## **SUMMARY**

As a research-driven science enthusiast and technology aficionado, I take a deep interest in transcending the theoretical constraints of an academic curriculum and applying learnt concepts to build practical solutions with a global outlook.

#### **EDUCATION**

Jadavpur University

Bachelor of Engineering in Information Technology. CGPA: 9.80

Kolkata, India Expected 2027

Relevant Coursework: Object Oriented Systems, Computer Networks,

Software Engineering

Activities and Societies: Member, ACM JU Student Chapter.

**Indian Institute of Technology Madras** 

Remote

Bachelor of Science in Data Science and Applications. CGPA: 9.63

Expected 2027

Relevant Coursework: Machine Learning, Business Data Management

Activities and Societies: Member, GDG on Campus

Birla High School

Kolkata, India

AISSCE (CBSE). Percentage: 98.20 AISSE (CBSE). Percentage: 99.00 May 2023 Aug. 2021

Relevant Coursework: Physics, Chemistry, Mathematics, Computer Science

Activities and Societies: Member, Robotics Club. Member, School Editorial Board

## SKILLS AND INTERESTS

Programming Languages C, C++, Java, Python, JavaScript

Frontend Development

Backend Development

Database Management

Vite, Tailwind CSS

Flask, Django, FastAPI

MySQL, PostgreSQL

DevOps Tools Git, Docker

OS and IDE Linux, Visual Studio Code

Languages English (Bilingual Proficiency), French (DELF B2 Certified)

Interests Retrieval-Augmented Generation, Computer Vision

# EXPERIENCE

#### Research Intern

Jan. 2025 – Present

Jadavpur University, Kolkata

- · Conducted research on developing a comprehensive evaluation metric for agentic RAG applications under the supervision of Dr. Pawan Kumar Singh.
- · Co-authored a paper, with two other students, currently under review at the 6th International Conference on Frontiers in Computing and Systems.
- · Sarcar, S., et al. (under review). Dynamic Contextual Enhancement for Retrieval-Augmented Generation.

#### Team Leader, Smart India Hackathon

Sep. 2024

Jadavpur University, Kolkata

- · Led a team of five members to secure selection in the internal hackathon.
- · Developed the backend for a functional prototype of a philatelic website using the Django framework.

#### PROJECTS

#### **RAGBot**

Chatbot integrating dynamic knowledge sources for context-aware responses Jan. 2025 - Feb. 2025 ragbot-llm.streamlit.app

- · Engineered a chatbot utilizing RAG techniques to provide accurate, context-aware interactions.
- · Implemented data retrieval, preprocessing, and web scraping modules to enhance the chatbot's knowledge base with real-time web data.
- · Developed an interactive chat interface via Streamlit for user engagement.

## Clipd

Minimalist clipboard application for effortless sharing of text and images Dec. 2024 - Jan. 2025 clipd-app.vercel.app

- · Developed a full-stack web application using Python's FastAPI framework for the backend and HTML5, Tailwind CSS for the frontend.
- · Enabled users to save text inputs, images, generate customizable links for easy access, and manage content through retrieval, updates, or deletion on a remotely hosted Supabase database.
- · Deployed the application on Vercel for seamless accessibility.

#### AWARDS AND ACHIEVEMENTS

Received the Meera Rani Mitra Memorial Award, presented by the NCE Bengal & Jadavpur University Alumni Association, for emerging as the highest scorer in the Bachelor of Engineering (Information Technology) First Year Examination 2024.

Mar. 2025

Received the L.N. Birla Medal for Excellence awarded by the Vidya Mandir Society for securing the highest marks in the AISSCE 2023 (Science stream).

Aug. 2023

Emerged as the first runner up in the Declamation event at Le Concours de la Francophonie 9e Édition organised by Mayo College, Ajmer.

Oct. 2022

Received the Diplôme d'Etudes en Langue Française Niveau B2 issued by the Ministry of National Education, Government of France.

Aug. 2021

Received the India Mathematics Genius Award from Countingwell on National Mathematics Day. Dec. 2020

Awarded a freeship by the Vidya Mandir Society for high achievement in the school examinations. 2019-2023