

ATMIK GOSWAMI

Kolkata, West Bengal

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Education

Jadavpur University

Bachelor of Engineering in Information Technology (CGPA of **9.25**)

November 2022 - April 2026

West Bengal, India

Experience

Jadavpur University

Jan 2024 – Jan 2025

Undergraduate Research Intern | (Dr. Pawan Kumar Singh) | (**Certificate**)

West Bengal, India

- Developed a novel hybrid deep learning approach integrating a customized Convolutional Neural Network (CNN) with a Long Short-Term Memory (LSTM) model for enhanced Music Emotion Recognition (MER) accuracy.
- Demonstrated superior performance compared to previous methods, leveraging two benchmark MER datasets, achieving notable recognition accuracies of **98.46%** and **96.25%** respectively.
- Presented the paper at the 9th International Conference on Data Management, Analytics Innovation, 2025.

Projects

CropDoc | Kotlin, Jetpack Compose, Dagger-Hilt, Retrofit, Room

4

- Developed CropDoc, an intuitive Android app for farmers featuring disease prediction, and remedy provider via image upload (leaf/crop), crop recommendations based on weather and soil data, and real-time access to the latest Indian agriculture news.
- Built a personalized crop activity tracker using **Room** (local DB), integrated **Retrofit** for API communication, and implemented **Dagger-Hilt** for efficient dependency injection and modular code architecture.

MediaForge | React, Flask, Celery, Redis, Docker

4

- Engineered a full-stack file utility web app **MediaForge** enabling users to perform image compression/conversion/resizing and PDF operations (compress, merge, extract) through a scalable microservice architecture.
- Built a cloud-based asynchronous processing system where client-uploaded files are stored on **Cloudinary**, and processing jobs are queued in Redis, consumed by a **Dockerized Celery worker**, with real-time progress tracking exposed via REST endpoints.
- Implemented advanced file optimization techniques including automatic format selection for max image compression, content-aware lossy/lossless PDF compression with QPDF, and efficient resource stripping (metadata/fonts), enhancing performance while maintaining compatibility and load speed.

Kora | React, NodeJS, ExpressJS, MongoDB

4

- Kora AI is a full-stack AI-powered journaling web application enabling users to write mood-tagged journals, chat with an integrated AI assistant, and visualize emotional trends via detailed analytics dashboards.
- Implemented secure **JWT** based user authentication flows and persistent chat/journal history using MongoDB. Designed and visualized interactive analytics dashboards using **React** with daily journal trends, and mood distribution graphs, leveraging NLP-based content analysis via **Mistral LLM**.

Srijan 2025 | React, NodeJS, ExpressJS, MongoDB, PassportJS

4

- Developed the authentication system for Srijan 2025 - The Annual Techno-management fest of Jadavpur University, handling approximately **5k users**.
- Implemented secure authentication using cookies and JWT, along with Google Sign In. Created an interactive front-end for signup / log-in using **React**.

Achievements

- Received the Best Paper Award at the 9th International Conference on Data Management, Analytics Innovation, 2025.
- Received Gold Medal from Jadavpur University, for academic excellence.
- JBNSTS Junior Scholar, 2020.
- Among the top 20 finalists in Kharagpur Data Science Hackathon, 2024, out of 6000 participants

Technical Skills

Languages: C++, Java, Kotlin, SQL

Technologies/Frameworks/Libraries: Android, Jetpack Compose, React, NodeJS, ExpressJS, MongoDB, Docker

Machine Learning: Regression, Classification, Neural Networks