Atmik Goswami

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Education

Jadavpur University

November 2022 - April 2026

Bachelor of Engineering in Information Technology (CGPA of 9.25)

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

Bloom | Kotlin, Jetpack Compose, Dagger-Hilt, Retrofit, Firestore | (Link)

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- A mental wellness and support app designed to provide comprehensive mental support to users.
- Implemented user authentication using **Firebase Google Sign in**. Users maintain their personal journal entries, and share their problems anonymously in different chat-rooms, using **Firebase Firestore** as the database. Applied hate-speech filtering for the chatroom messages using a BERT Classifier model.
- Added a chat-bot 'Ember' using Google's Gemini Pro model, to become the user's virtual friend. Included a therapy
 feature, where users can consult and book appointments with therapists connected with Bloom. Uses Retrofit for
 network calls and Dagger-Hilt for dependency injection.

CropDoc | Kotlin, Jetpack Compose, Dagger-Hilt, Retrofit, Room | (Link)

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- CropDoc is an user-friendly application built for the farming industry. Includes a disease prediction feature where users can simply upload an image of a diseased leaf/crop and receive the predicted disease and its remedies.
- Includes a crop recommendation feature to recommend suitable crops that can be grown, based on weather and soil conditions. Provides a section where users can read the latest agriculture related news of India to stay updated.
- Provides a personalised crop activity tracker which uses **Room** as the local database. Uses **Retrofit** for network calls and **Dagger-Hilt** for dependency injection.

StyleHub | NodeJS, ExpressJS, MongoDB, Razorpay, PassportJS | (Link)

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- Created the entire backend of a Fashion Store web application StyleHub using NodeJs, ExpressJs and mongoDB.
- Implemented user authentication using JWT and Social Logins. Created some **protected routes** for separate user and admin functionalities. Included **ratings and reviews** of a particular product, finding **delivery speed** from the nearest warehouse, cart and order management and routes, and payment gateway using **Razorpay**.

Srijan 2025 | NodeJS, ExpressJS, MongoDB, PassportJS | (Link)

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- 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 **ReactJS**.

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
- Awarded with the best UI/UX prize at Hackforge, Srijan 2024, Jadavpur University

Technical Skills

Languages: C++, Java, Kotlin, SQL

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

Machine Learning: Regression, Classification, Neural Networks