DEBSHANKAR DEY

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Education

Heritage Institute of Technology,Kolkata   **2021 - 2025**
B.Tech in Computer Science and Engineering   *9.71/10 CGPA*

Nava Nalanda High School   **2018 - 2020**
Higher Secondary   *93.4 percentage*

Nava Nalanda High School   **2009 - 2018**
Secondary   *94.3 percentage*

Work Experience

COZEVA   **Aug 2025 - Present**
SDE 1 (Full-Stack MERN Developer)   *On-site*

- Engineered solutions to address complex problems within the **U.S. health-tech sector**.
- Actively involved in projects encompassing multiple domains mainly on **health-care interoperability**, **agentic ai**.
- Solely led the end-to-end development of a **data-intensive** platform, leveraging **React, Node.js, MongoDB, and MySQL** for full-stack functionality.
- **Optimized** complex **SQL/NoSQL** queries for this system, ensuring efficient **data ingestion** and processing of **high-volume datasets**.

Projects

Real Life Violence Detection.   **Source Code**

- Developed **a real-life violence detection model** using custom **CNN** paired with **BiDirectional LSTM** architectures.
- Improved the accuracy by replacing **LSTM** with **Transformer**
- Leveraged Python's **Mediapipe** library for extracting human pose data.
- Created a balanced dataset of 50,000 pose landmark data, comprising of 25000 violence and 25000 non-violence pose landmarks, to train and validate the model's performance.
- Reached a test accuracy of **98.75 percent** for **LSTM** and **99.15 percent** for **Transformer** on the test dataset.

Travel Booking Website.   **Source Code**

- Deployed a **fullstack Travel Booking Website** using **Express framework** for flight and hotel booking
- Incorporated **Mongo Db** to store the user registration and transaction details
- Integrated **Stripe** gateway for safe and secure payment
- Applied **JWT** for creating and authenticating user sessions

AI-powered Interview Trainer.   **Source Code**

- Designed an **ai-powered** solution with **gemini ai** providing multi-domain **interview guidance**
- Engineered **socket** based solution and **three js based avatar-animation** to house the need for a realtime interview environment
- Formulated **deep-learning** and **nlp** based solutions for **facial and vocal** analysis
- Employed **gemini ai** for **interview performance** evaluation and **areas of improvement**

Skills

Computer Languages: C,C++,Python,Node JS
Frontend: HTML, Bootstrap, JS, CSS, React
Databases: MySQL, Mongo DB
Developer Tools: Postman, VS Code
Problem Solving: Data Structure, Algorithms
Versioning tools: git and github ,svn
Languages Known: English, Hindi, Bengali

Achievements

- Awarded the **best paper award** for the paper **Violens (Real Time violence detection system)** in the **International Conference on Artificial Intelligence and Sustainable Computing 2025**.
- Came within top 10 in **code-Frenzy** held at Heritage Institute of Technology, Kolkata.