SANDEEPAN CHAKRABORTY

+91-7086021776 | sandeepanchakraborty123@gmail.com |https://www.linkedin.com/in/Sandeepan-chakraborty/

Aspiring Software Developer specializing in MERN stack development and AI &ML engineering.

EDUCATION

VIT Bhopal University, Bhopal	Aug 2021 – Present
Integrated MTech with Specialization in AI and ML	CGPA – 8.53
Maharishi Vidya Mandir, Guwahati	May 2018 – March 2020
Class 12	Percentage-74.6%
NPS Internation School, Guwahati	March 2018
Class 10	Percentage – 91.4%

SKILLS

- **Programming Languages:** Java, JavaScript, Python
- **Frameworks & Libraries:** React.js, Node.js, Express.js, Redux Toolkit, Material UI
- **Databases:** MongoDB, Mongoose
- **AI/ML:** Deep Learning (LSTM), Computer Vision, Applied Machine Learning

PROJECTS

LSTM model for Indian sign language recognition   **Sep 2022 – April 2024**

- **Orchestrated the architecture** of a **real-time sign language recognition system** using **LSTM** and **Computer Vision**, achieving **91.50% accuracy**.
- Processed and analysed a dataset of **200K samples** from 8 subjects to enhance model robustness.
- **Optimized** system efficiency for **real-time inference** and scalability.
- **Impact: Developed an AI-driven sign language recognition system using LSTM, achieving 91.50% accuracy to enhance accessibility and communication.**

MERN Stack Admin Dashboard

- **Tech Stack: Material UI, Redux Toolkit, Node.js, Express.js, MongoDB, Mongoose**
- **Developed a responsive dashboard with Material UI and Nivo Charts, visualizing sales, inventory, and user metrics in real-time.**
- Implemented **Redux Toolkit**, **reducing API calls by ~30%** through optimized caching and state management.
- Built a **scalable backend** with **Node.js/Express.js (12+ RESTful endpoints)** and **MongoDB** (**25% faster queries** via Mongoose indexing).
- Secured system with **JWT authentication, blocking 100% unauthorized access** during testing**.**
- **Impact: Streamlined data analysis**, reducing report generation time from **hours to minutes.**

Full Stack E-Commerce Website

- **Tech Stack: React, Material UI, Redux Toolkit, Node.js, Express.js, MongoDB, Mongoose, JWT**
- **Engineered** an **interactive admin interface** featuring **real-time sales analytics**, **inventory management**, and **customer data visualization**
- **Streamlined frontend state management** using **Redux Toolkit**, **decreasing redundant API requests by ~35%** through intelligent caching
- **Designed** and implemented a **robust backend system** with **15+ RESTful endpoints**, secured with **JWT token authentication**
- **Enhanced database performance** by implementing **Mongoose query optimization, reducing response times by ~20%**
- **Impact: Automated reporting processes, slashing operational time from 2 hours to <15 minutes**

CERTIFICATES

Cloud Computing by IIT, Kharagpur (NPTEL)	June 2024
Applied Machine Learning in Python (Coursera)	January 2023