Maurya Samanta

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Education

Jadavpur University   *Sept 2022 – May 2026*
BE in Production Engineering

Salt Lake School (English Medium)   *May 2022*
Class XII ISC Examination

Projects

AI-Powered People Search Engine   *Demo Video* ↗
- Built a web app where users upload their LinkedIn **connections.csv** and search within their network using **natural language prompts** (Google OAuth 2.0).
- Built an **AI-powered search system** that stores connections data as **vector embeddings** and uses **cosine similarity** to find the most relevant results efficiently.
- Tools Used: **React.js, Node.js, MongoDB, Vercel, OpenAI API, Google API**.

Cloud-Based Encrypted Community App   *Github Repo* ↗
- Developed a **community platform** for chat, media sharing (100MB), and secure authentication.
- Implemented **asymmetric encryption** with **public key exchange**, storing **hashed keys** in MongoDB for secure chats.
- Implemented **cloud-based file viewers** to preview received files without downloading the same.
- Tools Used: **React Native, socket.io, Node.js, MongoDB, Cloudinary, AWS**.

Airport Congestion Predictor   *Blog* ↗   *GitHub Repo* ↗
- Built **XGBoost classifier** model to predict **airport runway and taxiway congestion** from large flight delays dataset
- Applied data cleaning and engineered features like **average taxi out times in a particular time window** for each airport
- Applied hyperparameter tuning using **GridSearchCV** and achieved **accuracy of 89%**
- Integrated **MLflow** for experiment tracking
- Tools Used: **Python, Jupyter Notebook, Pandas, NumPy, Matplotlib, Scikit-learn**.

Skills

Core Concepts: Operating Systems, Database Management Systems, Computer Networks, Theory of Computation
Languages: Java, Javascript, Python
Frameworks: React.js, React Native, Electron.js, Node.js, Django, MLflow
Libraries: NumPy, Pandas, Scikit-Learn, TensorFlow, Jupyter Notebook
Database: MongoDB, PostgreSQL
Cloud: Amazon AWS, Cloudinary, pgAdmin

Achievements

Top 10/100 teams at HackForge'24 Hackathon, Jadavpur University
Secured global rank of 56 at CodeChef Starters 136   Link ↗
Solved 300+ Data Structures and Algorithms problems across Leetcode and GFG
Top 20/50+ teams SnapSyntax'24 Contest, Jadavpur University
Java Certificate HackerRank Link ↗