Mahansh Aditya

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EDUCATION

Indraprastha Institute of Information Technology, Delhi — New Delhi, IND
B.Tech in Computer Science Engineering with a Specialisation in Design — *2021 – 2025*

EXPERIENCE

Full-Stack Developer — June 2024 – Sept, 2024
Plunes HealthCare — *Deployed* — *Gurugram, Haryana*
- Pioneered the creation of insurance **CRM panel**, streamlining communication for operations teams, hospitals, and insurance companies, **reducing response times by 20%**.
- Engineered and deployed robust, **scalable APIs** for insurance panels and in-house CRM using **Node**, **Express**, and **MongoDB**; enhanced **system efficiency by 20%** and streamlined data retrieval processes.
- Single handedly spearheaded the development of the website for **FICA organisation**, using **Next.js, SASS,** and **Ant Design** to create an **immersive** and **seamless user experience** for promoting sustainable development initiatives.

Full-Stack Developer — Dec 2024 – Sept 2024
CosyLab (Complext Sytesm Lab), IIIT-Delhi — *IIIT Delhi, New Delhi*
- **Developed** a full-stack food search platform using **React, Vite, Node.js** and **ElasticSearch**, enabling multi-criteria searches across **1 million** dataset entries.
- Engineered and integrated **3 ML models (Flask)** for NOVA class with **85%+ accuracy** based on nutrient levels.
- Implemented **Logstash ELT pipeline** to **transfer 1 million+ entries**, improving data ingestion **efficiency by 30%.**
- **Deployed** ElasticSearch and backend server with **Docker**, reducing deployment **time by 40%**.
- **Created microservices** for **ML models** and **ElasticSearch**, enhancing API **response times by 25%**.

PROJECTS

Game Mode Analysis | *GoLang MongoDB, Redis, JWT, Protobuf,React* — *GitHub* — Oct 2024 – Oct 2024
- **Developed** a multiplayer game analytics service that tracks and returns the most popular game modes based on user activity in specific area codes.
- **Simulated user behavio**r using **Go's concurrency model**, with **goroutines** randomly selecting from 10 predefined game modes, to **imitate real-world usage** across various regions.
- Implemented **JWT-based authentication** for **secure access**, Integrated **Redis for caching**, **reducing load** on MongoDB by storing frequently requested game mode data and **improving response times** under high traffic.
- Utilized **MongoDB** for **persistence**, storing game mode data and user information in a **scalable NoSQL database**.

Culinary Word Games | *Next.js, TypeScript* — *Deployed* | *GitHub* — Jun 2024 – Jul 2024
- Transitioned and optimized a culinary-themed crossword puzzle to **Next.js**, enhancing page load **speed by 20%** and boosting **SEO rankings by 5%**.
- Single handedly spearheaded the development of cullinary reltaed **hangman** and **word wipe**, using **Next.js**

VocalVerify | *React, Python, Flask* — *Deployed* | *GitHub* — Oct 2023 – Nov 2023
- Led the development of a platform for **detecting deep fake voice** using a **Random Forest ML model** providing user-friendly **WAV file analysis**.
- Developed the website with **Flask** serving a **REST API** with **React** as the frontend

Distributed Key-Value Store using Raft and Map-Reduce | *Python, gRPC* — Mar 2024 – Mar 2024
- Implemented a **fault-tolerant** distributed key-value store with **an enhanced Raft consensus algorithm**, ensuring high consistency and efficient node communication using **gRPC**.
- Optimized read operations with **leader leases**, **reducing latency** in multi-region databases and ensuring **robustdata persistence** through comprehensive log and metadata storage..

TECHNICAL SKILLS

Languages: C/C++, Python, Java, JavaScript

Frameworks: React.js, Next.js, MongoDB, MySQL, Node.js, Express.js,GoLang, Redis, FastAPI

Developer Tools: Git, GitHub, Google Cloud Platform, Elastic Search

Skills: Data Structures and algorithm, Object Oriented Programming, Full Stack Development, API Handling, Team Management, Problem Solving

Technical Electives: Computer Networks, Network Security, Machine Learning, Distributed Systems, Computer Organisation, Data Structures and algorithm, Operating System,Database and Management System, Analysis and Design of Algorithms