SAYANTAN HALDER

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Education

Institute of Infrastructure Technology Research and Management **August 2023 – Present**
Bachelor of Technology in Computer Engineering *Ahmedabad , Gujarat*

Relevant Coursework

- Data Structures
- Design and Analysis Algorithms
- Theory of Computation
- Database Management System
- Computer Architecture
- Digital Logic and Design

Experience

BlueCore IT **January 2025**
Full Stack Web Developer Intern *Ahmedabad, Gujarat*

- Devised **Taggle**, a web application for Q&A discussions, featuring a **scalable Node.js/Express backend** with a **RESTful API** and secure **JWT authentication** for session management. Integrated **MongoDB** with schema optimization and indexing to handle 10,000+ daily queries efficiently.
- Designed a responsive UI using **React.js** and **Tailwind CSS**, ensuring a modern, user-friendly experience. Implemented advanced search with Elasticsearch, enhancing keyword-based retrieval and improving search response time by 90%.

Projects

TeleMedicine | ⓞ | *MERN, WebRTC, TensorFlow, Scikit-Learn, NLTK, Reinforcement Learning* **March 2025**

- **Architected** an advanced **Telemedicine Web App**, harnessing **React.js, WebRTC, and Socket.io** to facilitate **real-time doctor-patient consultations**, reducing consultation wait times by **60%** and improving healthcare accessibility for **10,000+ rural users**.
- **Integrated** AI-driven **symptom analysis**, leveraging **TensorFlow, Scikit-Learn, and NLTK** to power an **NLP-based chatbot**, achieving **85% accuracy** in preliminary diagnoses and reducing unnecessary doctor visits by **30%**.
- **Spearheaded** the development of a **scalable backend** with **Node.js (Express.js) and MongoDB**, leveraging **microservices architecture** to handle **5,000+ concurrent users**, ensuring **99.9% uptime** and secure data processing.
- **Revolutionized** remote healthcare accessibility by incorporating **multilingual NLP capabilities**, **real-time video consultations**, and **alternative medicine recommendations**, increasing patient engagement by **40%** and expanding access to healthcare in **20+ underserved regions**.

Smart Face Attendance | ⓞ | *OpenCV, MTCNN, Scikit-Learn, Node.js, Supabase, RTSP* **February – March 2025**

- **Engineered an AI-driven Face Recognition Attendance System**, achieving 99%+ identity verification accuracy, leveraging MTCNN for detection and InceptionResnetV1 for **feature extraction from HikVision IP camera feeds**.
- **Optimized real-time face recognition**, reducing latency to <200ms, and achieved 99% **accurate automated attendance marking** using **Node.js** and **Supabase**.
- Formulated a full-stack admin dashboard with **React.js** & **Chart.js**, enabling 100% real-time attendance tracking, role-based access control, and data visualization for enhanced workforce management.

MindScan | ⓞ | *MERN, Flask, Machine Learning Algorithms, RESTful APIs.* **September – October 2024**

- **Built an AI-powered web app for mental health diagnosis using EEG and ECG data and machine learning**, improving accuracy by 90%. Developed a **Flask-based recommendation engine**, cutting manual assessment time by 85% with personalized treatment plans.
- Crafted a responsive UI with **React.js** and **Tailwind CSS**, boosting user engagement by 20%. Integrated a **Node.js** backend with **MongoDB**, ensuring 100% data integrity and smooth RESTful API communication.

Technical Skills

Languages: JavaScript, TypeScript, Python, C/C++, SQL, HTML5, CSS3
Libraries & Frameworks: React.js, Next.js, Redux, Tailwind CSS, Node.js, Express.js, Socket.io, Flask
Data Analytics and ML: TenserFlow, Scikit-learn, NumPy, Pandas, Matplotlib, OpenCV, TenserFlow
Tools and Platform: AWS, GitHub, ChatGPT, Jupyter Notebook, Figma, Supabase, OAuth, Webhooks, MongoDB
Soft Skills: Analytical Thinking, Self-Motivation, Resilience, Effective Communication, Team Collaboration

Extracurricular Activities

Alumni Relations **January 2025 – Present**
Database Manager *Institute of Infrastructure Technology Research and Management*

Tekstra – Coding Community **March 2025 – Present**
Community Outreach Member *Institute of Infrastructure Technology Research and Management*