

Nitesh Kumar Rai

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EXPERIENCE

TATA CONSULTANCY SERVICES LTD | FULL STACK WEB DEVELOPER

July 2022 – Present | Kolkata, India

- Developed an efficient reporting system for a soda ash plant to track **advisory adoption**, **timeseries trends**, and **efficiency report**, leveraging **MinIO** for report storage, **increasing production efficiency by 1%**.
- Designed a full-stack **Equipment Health Monitoring System** that **analyzes sensor data** and **predicts asset failure** using a pre-trained model. Developed an intuitive interface with **dynamic alerts** and **charts** and strong back-end to provide real-time insights for maintenance thus increasing **operational efficiency**.
- Designed an intuitive user interface (UI) for **product simulation**, enabling users to **modify material grades**, **assess feasibility**, and **analyze environmental impact** including **carbon footprint**, for streamlined decision-making
- Developed an AI-powered **document and media summarization** platform with an interactive chat UI. It allows users to **summarize and query text documents**, **caption audio/video files**, and engage in **context-aware conversations** based on the media. The system leverages LLMs for intelligent insights, making information retrieval seamless and efficient.
- Designed and developed four distinct but purpose-aligned user interfaces (UIs) incorporating responsive layouts and CSS, collectively streamlining associate on boarding and hands-on training, leading to a **reduction in training costs by up to 70%**:
 - Developed a UI that brings together **open-source approved models**, allowing users to register, access, and interact with them easily. The platform provides key details like the model's purpose, size, and specs, and the URL can be used for integration anywhere.
 - Developed a **code generator UI** that takes user prompts and writes code in various programming languages. The platform can also find bugs, explain code, and allows users to interact using voice through its **voice-to-text** feature.
 - Created a UI that generates **new data** based on existing datasets, trains models by adjusting various hyperparameters, and tests the results to evaluate the effectiveness of the trained models.
 - Developed a platform that serves as a central place for documents uploaded by an admin. Users can view or download the documents based on the admin's permissions.

PROJECTS

PERSONAL PORTFOLIO WEBSITE | FRONTEND DEVELOPER

Jan 2023 – Present | Kolkata, India

- Developed a responsive frontend portfolio using Next.js, Framer Motion for animations, and Tailwind CSS, with interactive transitions in galleries and navigation to boost engagement. Optimized for performance, SEO, and mobile responsiveness, achieving fast load times and high Lighthouse scores.
- View live site: portfolio-niteshh-ks-projects.vercel.app

EDUCATION

GOVERNMENT COLLEGE OF ENGINEERING AND CERAMIC TECHNOLOGY

B. TECH IN INFORMATION TECHNOLOGY

location 2018 - 2022 | Kolkata, India

CGPA: 9.1 / 10

SHREE JAIN VIDYALAYA

HIGHER SECONDARY

location 2015 - 2017 | Kolkata, India

Percentage : 80%

SHREE JAIN VIDYALAYA

SECONDARY

location 2015 | Kolkata, India

Percentage : 81%

SKILLS

PROGRAMMING LANGUAGES

Python • Javascript • Typescript

FRONTEND TECHNOLOGIES

ReactJS • NextJS • AngularJS • Redux • HTML • CSS • Tailwind CSS

BACKEND TECHNOLOGIES

Flask • NodeJS • Express.js • REST APIs • LangChain • LangGraph • GenAI

DATABASES

PostgreSQL • Mongo DB

TOOLS & TECHNOLOGIES

Docker • Git

LINKS

Github:// <https://github.com/Niteshh-K>
LinkedIn:// www.linkedin.com/in/nitesh-kumar-rai-397241193