

Manish Joshi

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Profile

Full-stack developer with hands-on experience building scalable web applications using React, Next.js, and FastAPI. Actively exploring Artificial Intelligence and Machine Learning with a focus on integrating intelligent models into production systems. Currently in the 6th semester of a Bachelor's degree in Electronics, Communication and Information Engineering, working on practical AI-driven applications and research-oriented projects.

Education

IOE, Thapathali Engineering Campus, Tribhuvan University 2022 – Present
Bachelor of Electronics, Communication and Information Engineering

Little Buddha Academy
+2 in Computer Science

Tech Stack: Typescript, Next.js, Python, FastAPI, PostgreSQL, Numpy, Pandas, Scikit-learn, Keras

Some Projects

TabFlux [Demo](#) • [Code](#)

A platform designed to bridge academic learning with industry-oriented technical skills. Built with Next.js, Tailwind CSS, and Redux Toolkit Query, implementing scalable API integration and structured state management for smooth user experience.

Lexia [Demo](#) • [Code](#)

An AI-assisted IELTS preparation platform that evaluates user responses and generates automated feedback using intelligent processing pipelines. Focuses on natural language analysis and adaptive learning support.

Zingo [Demo](#) • [Code](#)

A real-time chat application built using WebSocket-based communication to enable instant messaging with responsive UI and scalable backend interaction.

TCIOE CMS [Demo](#) • [Code](#)

A feature-rich content management system developed for structured management of events, news, and administrative data. Designed with React with RTK query, MUI and modern frontend architecture principles to ensure maintainability and modular growth.

CF-MADRL [Code](#)

Research-focused project on Clustered Federated Multi-Agent Deep Reinforcement Learning for adaptive traffic signal control. Explores decentralized learning strategies and reinforcement optimization for intelligent traffic management.

Machine Learning Journey

Documenting structured progress in machine learning research and experimentation:

[Supervised Learning](#)

[Deep Learning](#)

[Machine Learning Experiments](#)

Teaching Experience

Conducted a structured one-month training program covering web fundamentals and React development for a small group of students.

[React-Course Repository](#)