

NIRANJAN ALASE

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Education

Indian Institute Of Information Technology, Kottayam

B.Tech in CSE (Major in Artificial Intelligence and Data Science)

2023 – 2027

CGPA: 8.76/10

Experience

AlgoUniversity (Y-Combinator-backed EdTech)

[Live Demo](#) | [Source Code](#)

Software Development Extern (Remote)

- Engineered a robust, scalable **full-stack online judge platform** (similar to LeetCode) enabling real-time code execution, automated grading, and user management.
- Integrated **Gemini API** for AI-driven resume parsing, personalized feedback, and candidate recommendations, enhancing user engagement.
- Implemented advanced analytics: **tag-based problem categorization**, daily activity heatmaps, and progress dashboards to drive user retention.
- Leveraged **Docker** for microservices containerization; automated deployment pipelines using **Render** and **Vercel** for continuous integration.
- Tech Stack: React.js, Node.js/Express.js, MongoDB. Mentored by senior engineers from **Google**, **Apple**, **Bytedance**, and **Alphagrep**.

Amity University – USRF 2025

[Source Code](#)

Research Intern

Noida, India — June – July 2025

- Designed and trained a **multi-label deep learning model** (CNN-LSTM with attention) for automated physiotherapy exercise recognition and rehabilitation assessment.
- Fused multi-sensor data (accelerometers, IMUs, sEMG) to enable accurate, real-time patient monitoring and objective progress tracking.
- Utilized **Python**, **TensorFlow**, and advanced signal processing libraries; deployed models in a simulated healthcare AI environment.
- **Key Results:** Achieved real-time patient feedback, high-accuracy classification, and enhanced clinical decision support for rehabilitation.

Projects

ChatNova – AI-Powered Conversational Platform

[Live Demo](#) | [Source Code](#)

- Developed an interactive AI chatbot leveraging **Gemini API** and the **MERN stack** (MongoDB, Express.js, React, Node.js) for seamless user experiences.
- Implemented secure **JWT authentication**, state management with **Redux**, and deployed on **Vercel** for high availability.
- Demonstrated end-to-end full-stack development, RESTful API integration, and cloud deployment best practices.

Technical Skills

Languages: Python (NumPy, Pandas, Matplotlib), Java, C++, JavaScript

Frameworks & Libraries: React, Node.js, Express.js, TensorFlow, Keras, Scikit-learn

Frontend: TailwindCSS, HTML, CSS, Bootstrap

Cloud & Databases: MongoDB, MySQL, AWS, Docker, Vercel, Netlify

Developer Tools: GitHub, VS Code, Postman, Jupyter Notebook