Jaydeep Mukherjee

Bengaluru,India | jaydeepmukherjee2003@gmail.com | +91 7848996685 |
linkedin.com/in/jaydeep-mukherjee/ | github.com/Jayxdeep

Summary

Backend Developer skilled in building scalable systems using Node.js and Express.js, with hands-on experience designing REST APIs, authentication layers, and distributed backend workflows. Strong in MongoDB and SQL-based architectures, API optimization, caching, and system design fundamentals. Currently expanding expertise into Golang for high-performance backend development.

Technologies

Languages: JavaScript, TypeScript, Java, Golang(Basics), Python

Frontend: HTML, CSS, JavaScript, React

Backend: Node.js, Express.js, REST APIs, Authentication (JWT, OAuth), Caching (Node-Cache), Microservices (Basics), API Documentation

Database: MongoDB, MySQL

Tools & Others: Git, GitHub, Postman, WSL, Docker (Basics)

Projects

Climate-Adaptive IoT Drip Irrigation System [GitHub] June 2025–Present

- Building a distributed backend using **Node.js** and **Express.js** to process continuous telemetry streams via **MQTT**.
- Designed a dual-database architecture using **MongoDB for time-series sensor data** and **MySQL for user & device management**.
- Implementing climate-adaptive automation using weather APIs + soil moisture analytics, improving irrigation efficiency by ∼25%.
- Collaborating with ECE + CE teammates to build a scalable precision-agriculture system.

AI-Powered Teacher Assistant | Google Hackathon [GitHub] March 2025–April 2025

- Built a **MERN** stack platform for automated assignment grading, lesson planning, and student tracking.
- Integrated an external AI grading API, reducing manual evaluation time by ∼40% while improving feedback quality.
- Implemented teacher dashboards, CRUD operations, role-based access control, and real-time syncing.
- Designed the solution aligned with UN SDG 4 for scalable and inclusive ed-tech.

Influence IQ | Auraflix Hackathon [GitHub] April 2025

- Developed backend microservices using **Node.js, Express.js, and MongoDB** for influencer credibility evaluation.
- Implemented secure authentication with **Clerk**, API rate limiting, and session validation.
- Designed dynamic credibility scoring algorithms to detect fake engagement and ensure fair rating.
- Strengthened data integrity using validation layers and server-side filtering.

Passwordless Authentication System [GitHub] Feb 2025–March 2025

- Developed a secure passwordless authentication system using **JWT**, **token rotation**, and **encrypted login links**.
- Eliminated password storage risks by implementing email-link login flows with strong encryption.
- Architected the backend for easy integration into existing MERN applications.

Turn Counter using Arduino [GitHub] March 2024–July 2024

- Programmed Arduino Uno with IR sensors to detect directional movement and increment counts in real time.
- Displayed readings on an LCD display with optimized debounce logic for stability.

Education

New Horizon College of Engineering, Bengaluru 2022–Present
B.E. in Electronics and Communication Engineering

- Expected Graduation: 2026