

Asit Kumar

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PROFESSIONAL SUMMARY

Backend Developer specializing in Python (FastAPI) and Node.js (Express.js), building RESTful APIs and microservice-based systems. Experienced in JWT authentication, Role-Based Access Control, PostgreSQL query optimization, and Redis caching for real-time applications. Working on AWS S3 integration and Retrieval-Augmented Generation (RAG) workflows using vector databases for AI-powered search features.

WORK EXPERIENCE

Knowledge Excel Pvt Ltd Mar 2026 – Present
Backend Developer Trainee Delhi, India

- Built RESTful APIs in Python (FastAPI) for core product modules, structuring services around a microservices architecture.
- Implemented JWT authentication with token refresh and session management across 8+ API endpoints.
- Optimized PostgreSQL queries and added indexing to reduce API response latency.
- Integrated AWS S3 for cloud file storage and implemented an initial RAG retrieval pipeline using vector embeddings for AI-powered search.
- Used Git for version control within an agile workflow, participating in code reviews and deployment.

Webapphealing Technology Pvt. Ltd. Dec 2025 – Feb 2026
Backend Developer Intern Noida, India

- Built 12+ RESTful API endpoints using Node.js and Express.js, following MVC architecture.
- Implemented JWT authentication and Role-Based Access Control (RBAC) to manage protected access across user roles.
- Built reusable middleware for request validation, centralized error handling, and logging to improve service maintainability.
- Applied asynchronous request handling and API-level optimizations to improve backend throughput.

PROJECTS

Smart Food Waste Reduction Platform

[Visit project](#) [GitHub](#)

Backend system for a donation platform connecting food donors with NGOs in real time.

- Designed and built the backend using Node.js, Express.js, and MongoDB, with geospatial indexing to support location-based donor-to-NGO matching.
- Implemented JWT authentication and RBAC for multi-role access: donors, NGOs, and admins.
- Built a matching algorithm combining distance scoring, urgency level, and NGO capacity to rank donation-to-recipient pairings.
- Used Socket.io for real-time donation status updates and Redis caching to reduce repeated database load on high-traffic endpoints.

Tech stack: Node.js, Express.js, MongoDB, Redis, Socket.io, JWT, RBAC, OpenStreetMap API

EchoSphere — Real-Time Chat Application

[Visit project](#) [GitHub](#)

Backend for a real-time messaging platform with secure authentication.

- Built an event-driven messaging backend using Node.js and Socket.io to handle real-time message delivery.
- Implemented JWT authentication, OAuth 2.0, and bcrypt password hashing for secure user access.
- Designed RESTful APIs with Express.js middleware, including rate limiting to protect against abuse.

Tech stack: Node.js, Express.js, MongoDB, Socket.io, JWT, OAuth 2.0, bcrypt

CODING PROFILES

- LeetCode:** 200+ problems solved across Data Structures & Algorithms · Contest rating: 1458
- GeeksforGeeks:** 120+ problems solved · Coding score: 310+
- HackerRank:** Certified — Problem Solving (Intermediate), Python (Basic)

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, TypeScript, SQL

Backend: FastAPI, Node.js, Express.js, RESTful APIs, MVC Architecture

Data & caching: PostgreSQL, MongoDB, MySQL, Redis, Database Design, Query Optimization, Indexing

Authentication: JWT, OAuth 2.0, RBAC, bcrypt

Cloud & DevOps: AWS S3, Docker, Git, GitHub, Linux, CI/CD Pipelines, Postman

AI & GenAI: Retrieval-Augmented Generation, Vector Databases, Prompt Engineering, API Integrations

EDUCATION

Dr. A.P.J. Abdul Kalam Technical University (AKTU) 2022 – 2026
Bachelor of Technology in Computer Science and Engineering · CGPA: 7.7/10.0