Muhammad Zohaib Malik

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Technical Skills:

Languages: JavaScript, TypeScript
Backend Technologies: Node.js, Express.js
Databases: MongoDB, Redis
Cloud & DevOps: Docker, AWS(S2,S3)

Projects:

Airline Backend   Source Code

- Architected and developed a scalable **microservices-based backend** for an **airline booking system**, separating concerns into two main services: **Flight Service** and **Booking Service**.
- Built the **Flight Service** to handle operations such as flight creation, scheduling, seat availability, and route management using **Node.js**, **Express.js**, and **MongoDB**.
- Developed the **Booking Service** to manage user reservations, ticket issuance, and booking history. Utilized **MongoDB transactions** for atomic operations involving multiple collections (e.g., users, flights, bookings).
- Optimized database performance with **mongoose indexing**.
- Applied centralized **error handling**, **logging** (**Winston**), and input **validation** (**Zod**), for consistent and secure API responses.
- Added a **cron job** for automation, which ensures that if a booking remains unconfirmed, it will automatically transition to a **cancelled** state after 5 minutes.

File Storage   Source Code

- Developed a scalable **file storage system** that allows users to upload and download their own files, including videos, securely and efficiently.
- Designed the system to create a unique **user folder** for each registered user, ensuring that each user has access only to their own files.
- Built the **file upload functionality** using **Node.js** and **Express.js**, allowing users to upload documents, images, and videos to their personal folder within the storage system.
- Implemented secure **session-based authentication**, allowing users to stay logged in while ensuring only authorized access to their files.
- Enforced a restriction of **maximum two active login sessions per user**, enhancing security and preventing misuse of credentials.
- Developed **file download functionality**, enabling users to retrieve their files in various formats, with a smooth user experience.

Education:

PMAS Arid Agriculture University, Rawalpindi   2025
Bachelor's in Computer Science