

Fleet Management Dashboard — Backend Requirements

Overview:

This project is a web-based fleet management dashboard that allows companies to monitor and manage their vehicles in real time using the Cartrack Open Fleet API. The frontend (React) is fully completed. I now need a backend developer to build the server-side logic and integrations.

Tech Stack (Preferred)

Backend Language: Node.js (Express.js)

Database: MongoDB or PostgreSQL (open to suggestion)

Auth: JWT / OAuth (secure session management)

Hosting: Vercel, Render, Heroku, or AWS

Real-Time: Socket.io (for live tracking updates, optional)

1. User Authentication & Access Control

Registration & login (email + password)

JWT-based authentication

Role-based access (Admin, Manager, Viewer)

Each company/client can only see their fleet

2. Cartrack API Integration

Integrate the [Cartrack Open Fleet API]

Fetch:

Vehicle locations (live)

Fuel usage data

Maintenance logs

Vehicle statuses

Set up auto-refreshing logic (real-time or interval-based updates)

3. Core Backend Features

User account management (add/update/delete users)

Fleet data endpoints (vehicles, fuel stats, status, etc.)

Maintenance scheduling logic

API response formatting (clean, frontend-ready JSON)

Error handling & logging

4. Database Models (Suggested)

Users

Vehicles

Fuel Logs

Maintenance Events

Settings / Preferences

⚙️ 5. Settings Management

Update user profile

Update company settings (logo, company name, timezone)

Notification preferences

Optional: Webhook configuration for real-time data

📱 6. Optional Features

Admin panel for super admin (you) to manage companies

API rate limiting & security middleware

Unit testing or Postman collections for API endpoints

7. Deliverables

RESTful API (Node.js-based)

Documentation (README or Postman collection)

Database schema / ERD

Deployment-ready server