Dear Keshvi Siroya,

We are pleased to assign a real-time project to you as a special request from the Company's C.O.O.

Project title: DriveNest

Description: This assignment is designed to assess your skills in building an end-to-end logistics management solution focusing on truck transport operations. The system is expected to provide real-time monitoring, route optimization, communication with drivers, and delivery tracking.It involves modules like Admin/Owner dashboard, Driver portal, GPS integration, ML-based delay prediction, notifications, and comprehensive reports. The project simulates a scalable logistics environment using web and backend technologies, along with optional machine learning capabilities.

Objectives:

1. Admin Panel Development**:**
Design an interface for owners to manage transport operations, assign drivers, monitor activity, and generate reports.

2. Driver Dashboard:
Provide drivers with a mobile/web interface to receive job info, update delivery status, and communicate in real-time.

3. GPS Integration & Route Planning:
Integrate live GPS tracking and suggest optimal routes to reduce delivery time and fuel consumption.

4. Machine Learning Module (optional):
Implement delay prediction based on historical route data, traffic, and environmental conditions.

5. Reports & Analytics:
Provide visual dashboards and exportable reports for completed deliveries, pending requests, and operational efficiency.

Deliverables:

User Interface: Interactive web-based interface with role-based access for Admin and Driver.

Backend: Functional backend using Flask/Django with database integration.

ML Integration (Optional): Delay prediction and route optimization.

Documentation: Final report summarizing methodology, modules, and future scope.

If possible, consider expanding this project to integrate with real-time logistics APIs and third-party tracking services.

Best wishes to you.

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