

Project Design Phase

Problem Solution Fit

Date	9 APRIL 2025
Team ID	SWTID1742640402
Project Name	MyRide
Maximum Marks	4 Marks

The **Cab Booking Application** bridges the gap between urban mobility challenges and a tech-driven solution by aligning real-world transportation pain points with targeted features.

Problem Recap

- Inefficient Ride Matching:**
 - User Struggle:* Long wait times during peak hours due to poor driver allocation.
 - Impact:* Frustration, missed appointments.
- Unreliable Real-Time Tracking:**
 - User Struggle:* GPS delays or inaccurate ETAs lead to uncertainty.
 - Impact:* Passenger-driver miscommunication, wasted time.
- Payment Failures:**
 - User Struggle:* Transactions decline due to network issues or app glitches.
 - Impact:* Ride cancellations, loss of trust.
- Safety Concerns:**
 - User Struggle:* Riding with unknown drivers feels risky, especially at night.
 - Impact:* Low adoption among vulnerable groups (e.g., solo travelers).
- Driver Dissatisfaction:**
 - Driver Struggle:* Low earnings after commissions, unfair ride distribution.
 - Impact:* High turnover, fewer available cabs.

Our Solution

Inefficient Ride Matching

Solution: AI-powered dynamic dispatch algorithm

Key Feature: Matches riders with the nearest available driver in under 90 seconds.

How It Works: The app utilizes AI algorithms to analyze real-time data, predicting optimal driver-passenger pairings and optimizing routes. This approach minimizes wait times and enhances fleet efficiency .

Unreliable Tracking

Solution: Live WebSocket updates combined with Google Maps integration

Key Feature: Provides real-time location synchronization every 10 seconds.

How It Works: By leveraging WebSockets, the app ensures continuous, low-latency communication between the server and client, enabling seamless real-time location tracking on Google Maps .

Payment Failures

Solution: Supports multiple payment gateways (UPI, cards, wallets) with offline retry logic

Key Feature: Automatically retries payments during temporary glitches.

How It Works: The app integrates with various payment gateways and incorporates smart retry mechanisms that attempt to process failed transactions multiple times, enhancing the likelihood of successful payments .

Safety Gaps

Solution: In-app SOS button with live location sharing to emergency contacts

Key Feature: Sends SMS alerts with real-time location to trusted contacts.

How It Works: Upon activation, the SOS feature shares the user's live location and trip details with emergency services and designated contacts, facilitating prompt assistance .

Driver Dissatisfaction

Solution: Transparent earnings dashboard with priority for high-rated drivers

Key Feature: Provides daily profit breakdowns and performance-based bonuses.

How It Works: The app offers drivers a comprehensive dashboard to monitor earnings and performance metrics. High-rated drivers receive prioritized ride requests and additional incentives, fostering motivation and satisfaction .