

Fleet Management Made Easy



INFOSYS SPRINGBOARD INTERNSHIP 6.0

NeuroFleetX - AI-Driven Urban Mobility Optimization

Tech Stack:

React.js • Spring Boot • PostgreSQL • REST APIs

What is NeuroFleetX?

A full-stack fleet management and analytics platform that simulates real-world fleet operations, vehicle tracking, maintenance workflows, and multi-role dashboards for intelligent decision-making.

Project Objectives

- Build a full-stack fleet management system with secure login and core modules
- Provide real-time tracking, booking validation, and maintenance alerts.
- Develop role-based analytics dashboards with KPIs and charts.
- Deliver a modern, responsive UI with reusable components and dark mode.



Methodology

- Planned & Analyzed system requirements and user roles.
- Developed Frontend using React with reusable components and modern UI.
- Built Backend using Spring Boot REST APIs connected to PostgreSQL.
- Integrated & Enhanced features like live tracking, validations, reminders, and analytics dashboards.



System Overview & Core Modules

»» Core Functional Modules Developed

- Authentication System: Secure login, role-based access
- Fleet Dashboard: Real-time KPIs & operational insights
- Vehicles Module: Vehicle records + live tracking
- Bookings Module: Scheduling, conflict validation
- Maintenance Module: Alerts, reminders, service logs
- Settings Page: Configurations, theme options

»» Backend & Database

- Spring Boot REST API
- PostgreSQL relational schema
- Clean controllers, validations, entity mapping



NeuroFleetX – AI-Driven Urban Mobility Optimization:

Development Phase Overview

This phase focused on building the core system structure, essential modules, and the initial interface needed to operate NeuroFleetX effectively.

Backend API Development

Created key REST APIs for authentication, vehicles, bookings, maintenance, and settings. Implemented structured controllers, validations, and secure data communication across modules

Core Platform Setup

Configured the full-stack environment using React, Spring Boot, and PostgreSQL. Established reusable components, routing, and database schema to support scalable development.

Primary UI & Dashboard Design

Developed the initial Dashboard, Vehicles, Bookings, and Maintenance pages with responsive layouts and pastel-themed UI design. Added basic interactions, smooth transitions, and intuitive navigation.

Milestones

01

Milestone 1 – Foundation Setup

Learned Java, React, Spring Boot basics and built the initial login UI, API practice, and project environment setup.

02

Milestone 2 – Core Module Development

Completed Authentication, Dashboard, Vehicles, Bookings, Maintenance, and Settings pages with backend integration.

03

Milestone 3 – Feature Enhancements

Added live tracking upgrades, maintenance reminders, booking validations, improved UI/UX.

04

Milestone 4 – Advanced Analytics Implementation

Developed Admin, Employee, and Customer Analytics dashboards with KPIs, charts, filters, tables, reusable components.



Weeks 1–2

- Learned Java, React basics, Spring Boot, and database setup.
- Built initial login page and practiced API connections.



Weeks 3–4

- Developed core pages: Dashboard, Vehicles, Bookings, Maintenance, Settings.
- Implemented backend APIs and linked all modules.



Weeks 5–6

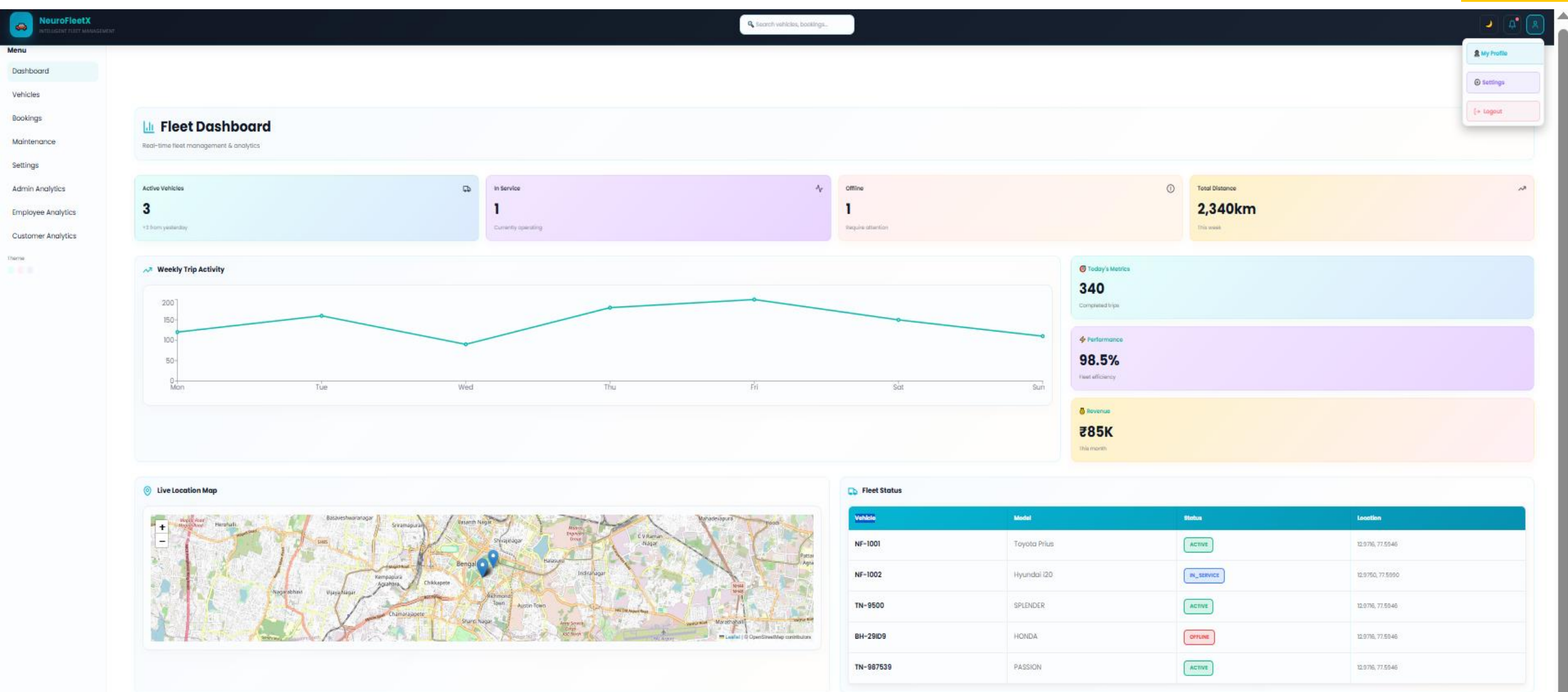
- Completed full frontend–backend integration with PostgreSQL.
- Fixed issues, added validations, and presented core milestone.



Weeks 7–8


- Added enhancements: tracking, reminders, theme options.
- Built Admin, Employee, Customer Analytics dashboards with KPIs & charts.

Project Results:








Project Results:

 **NeuroFleetX**
INTELLIGENT FLEET MANAGEMENT

Search vehicles, bookings...







My Profile

Settings

Logout

Menu

Dashboard

Vehicles

Bookings

Maintenance

Settings

Admin Analytics

Employee Analytics

Customer Analytics

Theme

Booking Management

Create and manage your vehicle bookings

Create Booking

Customer name

Customer email

Pickup

Drop

Vehicle type

Create

Booked

2

Completed

1

Total Revenue

₹250

Alice

Booking ID: 1

✓

MG Road → Indiranagar


₹250

COMPLETED

Details

JOHN

Booking ID: 2




PARIS STREET → MNC ROAD

BOOKED

Details

JACK

Booking ID: 3

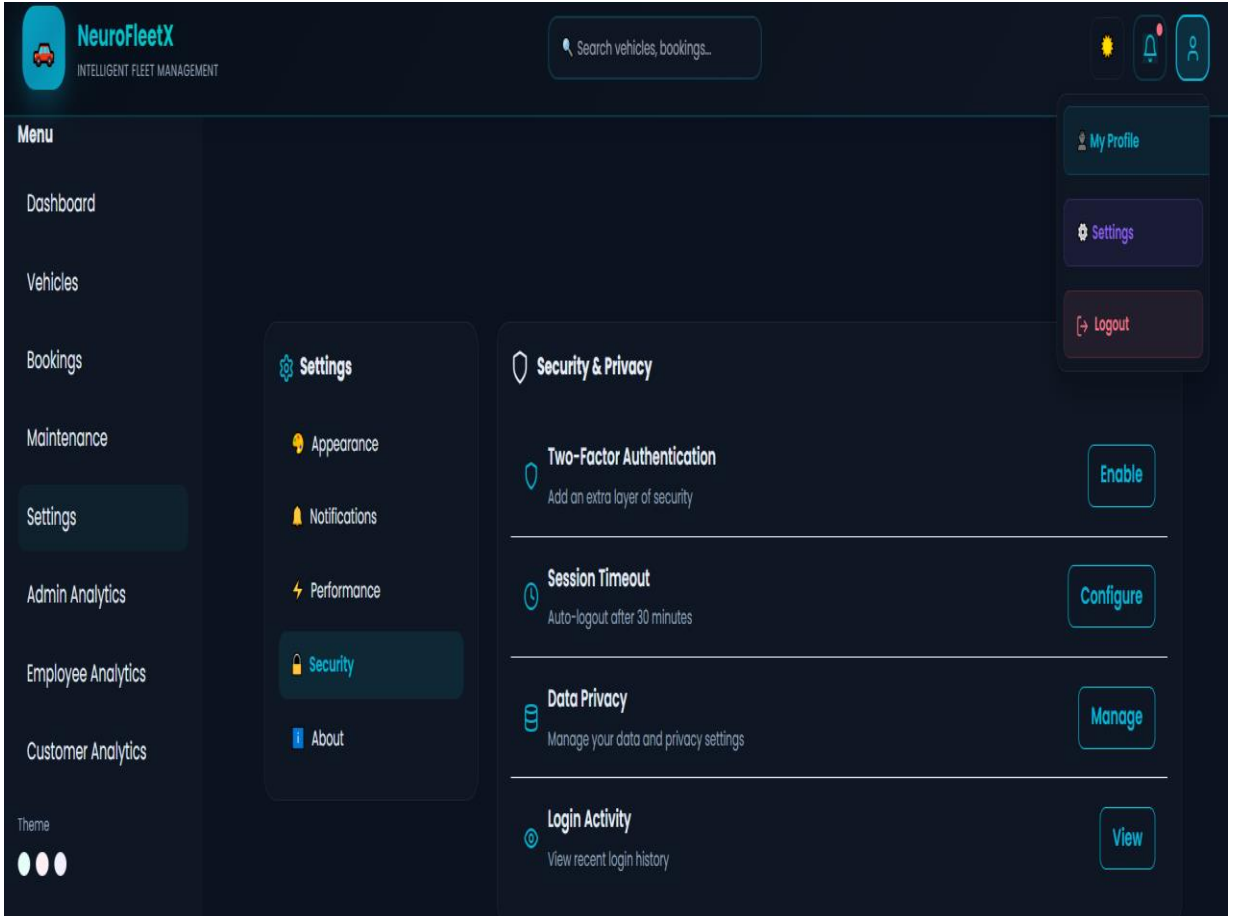
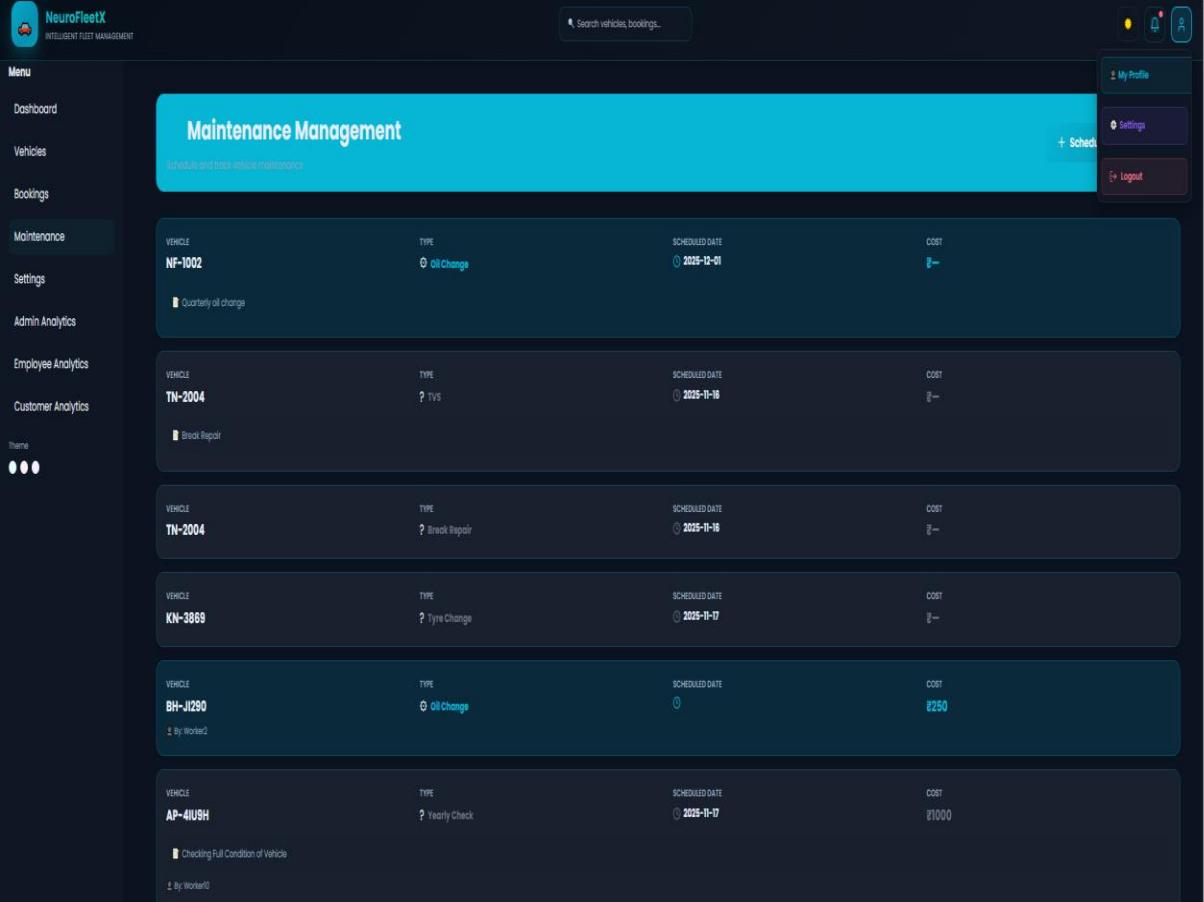


ABD ROAD → MOUNT VIEW STREET

BOOKED

Details

Project results:



>>> Project Results:





Project Results:



INTELLIGENT FLEET MANAGEMENT

 Search vehicles, bookings...



68 B • Done



Menu

Dashboard

Vehicles

Bookings

Maintenance

Settings

Admin Analytics

Employee Analytics

Customer Analytics

Theme



Employee Analytics

Driver and operations performance

Last 7 days

Group by day

Export CSV

Refresh

On-time %

89%



Avg Pickup time

4m 12s

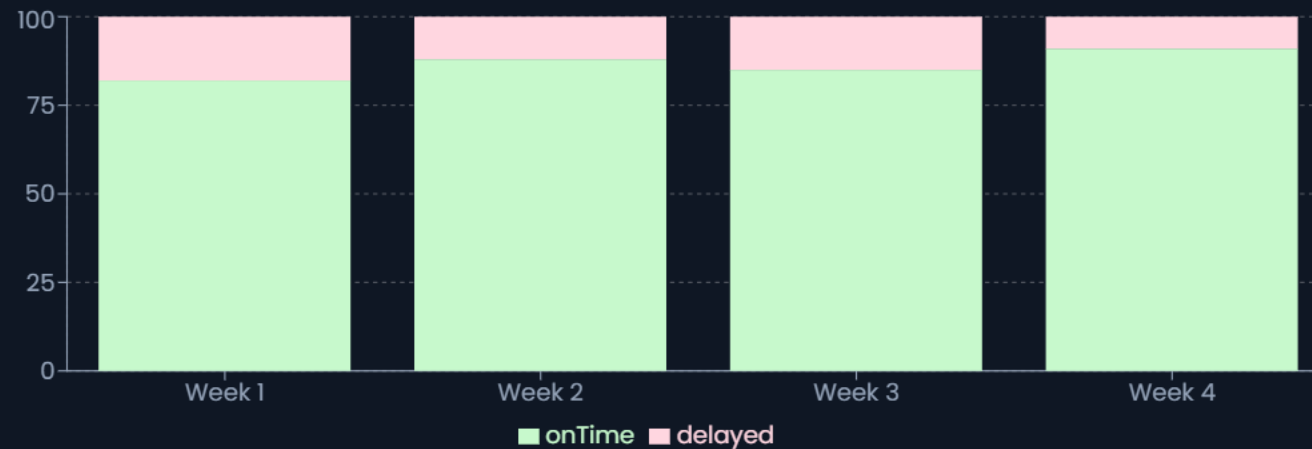


Incidents

12



On-time vs Delayed (weekly)



Driver leaderboard

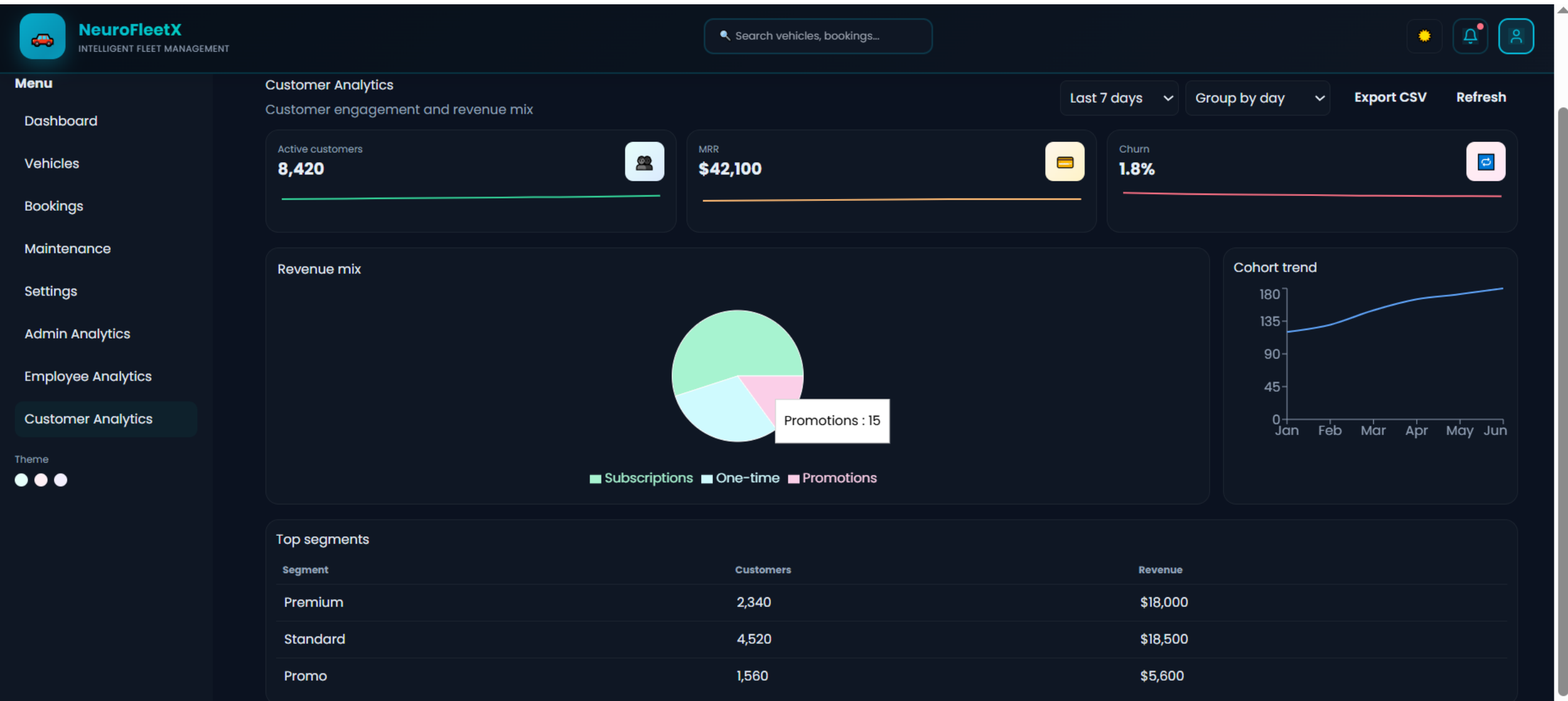
Name	OnTime %	Rides
Driver A	96%	420
Driver B	94%	398
Driver C	91%	365

Quick actions

**Message top
drivers**

Export leaderboard

>>> Project Results:





Conclusion:

The NeuroFleetX project successfully delivered a full-stack fleet management system with modern UI, robust backend APIs, and advanced analytics dashboards. The work enhanced the platform's workflow efficiency, real-time visibility, and data-driven insights. Overall, the project demonstrates a strong integration of frontend, backend, and database technologies in a practical mobility solution.