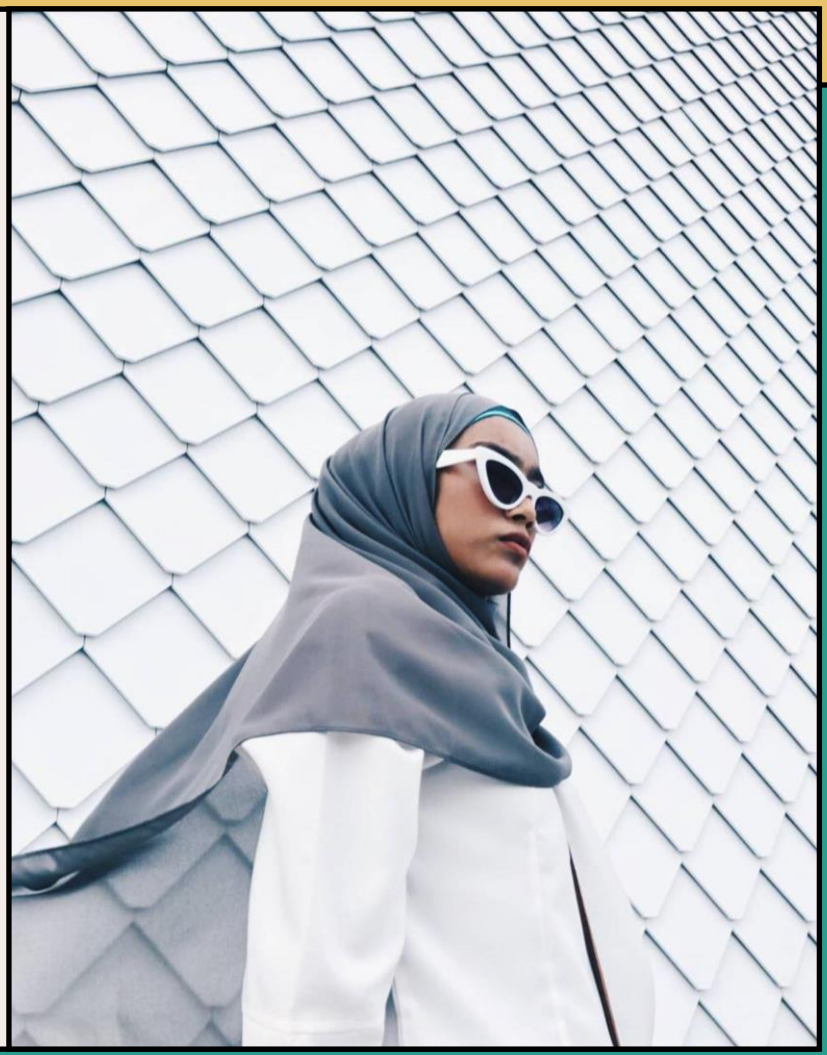
User Needs and Requirements

FixIT



Agenda

Project Overview

User Needs

Requirements

Engineering Standards

Conclusions

Introduction

•Problem Statement: Unexpected vehicle failures can lead to costly repairs and safety risks.
•Importance: Reducing unexpected breakdowns improves driver safety and reduces maintenance costs.
•Context: The system uses AI to monitor vehicle health in real-time, predicting potential failures before they occur.

User Needs

- Identify Users: Car owners, fleet managers, automotive technicians.
- Needs Assessment:Reliable alerts for maintenance needs.
- Easy-to-use interface for monitoring vehicle health.
- Cost-effective solution that integrates with existing vehicle systems.
- User Insights: Surveys indicate a strong demand for predictive maintenance tools to avoid unexpected repairs.

Requirements

Categorized Requirements:Functional Requirements:Real-time data collection from OBD scanners.
Predictive analytics for identifying potential failures.
Non-functional Requirements:User-friendly interface.
High accuracy in predictions (above 90%).

Conclusion

- Summary: The AI-based maintenance system addresses critical user needs by providing timely alerts and reducing unexpected vehicle failures.
- Next Steps: Finalize AI model development, conduct extensive testing on selected vehicles, and prepare for deployment.
- Feedback Request: Seeking feedback on user interface design and additional features that could enhance user experience.