

FixIt

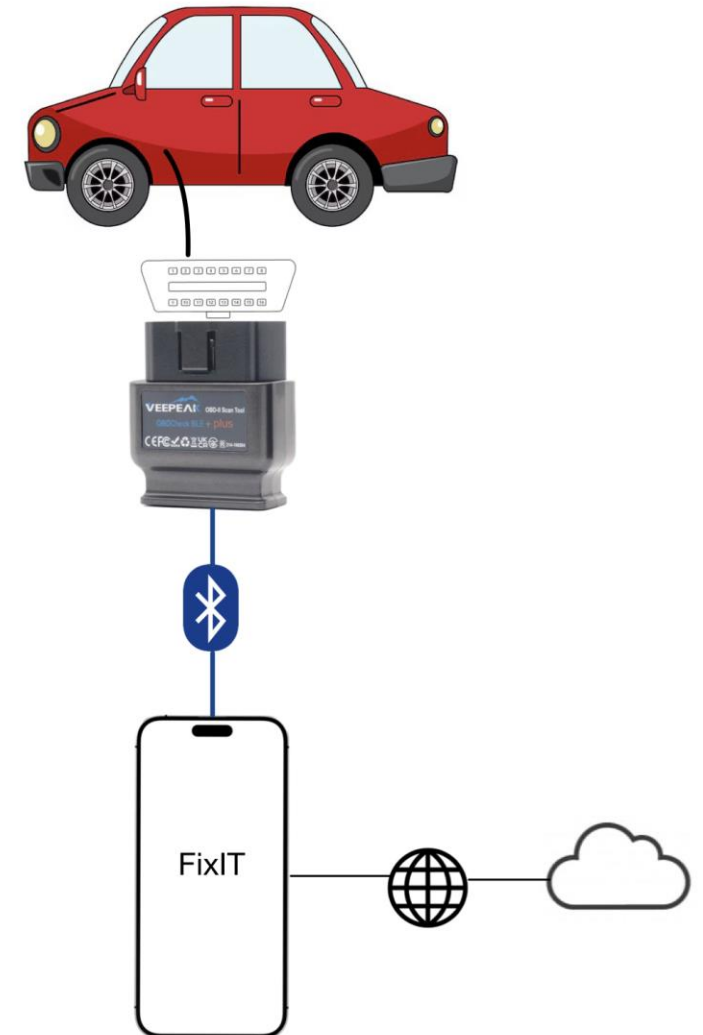
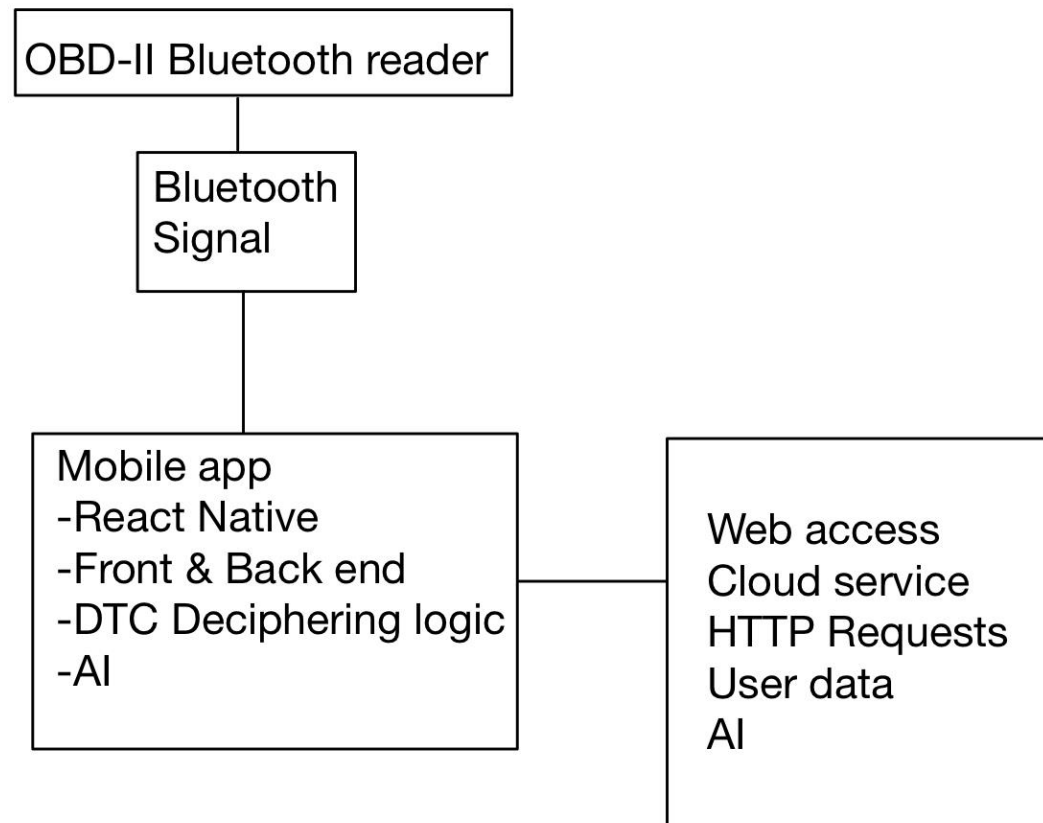
AI-based car preventative maintenance application

Team: sdmay25-44

Advisor: Dr. Gulmezoglu

Project Overview

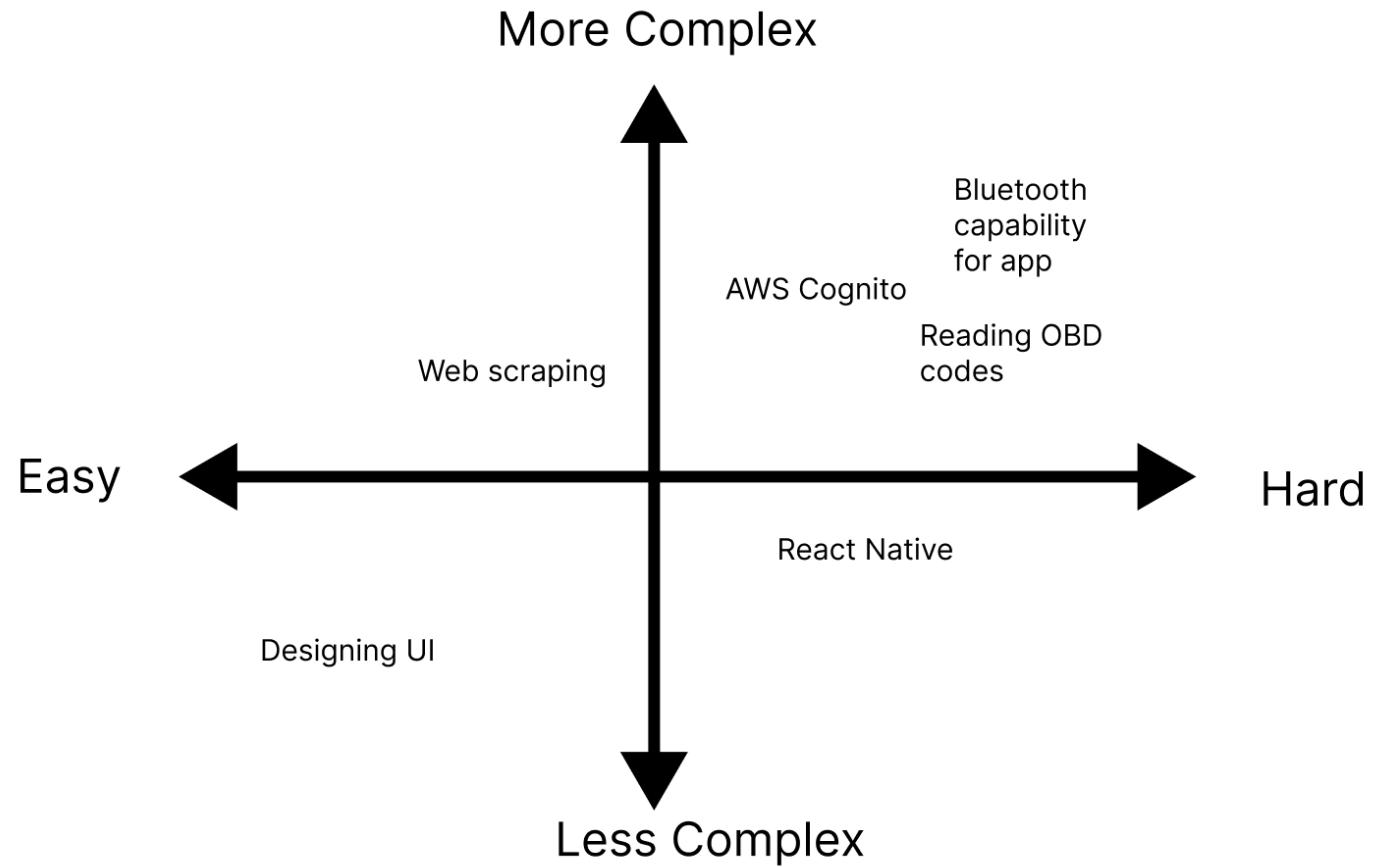
- User has application on Bluetooth capable phone
 - Connects to OBD reader to access codes on app
 - Uses cloud and web to gain more accurate insight on what the problem is



Artifacts

Human	Economic	Technical
<ul style="list-style-type: none">• User-friendly app interface, accessible diagnostics• Bluetooth for simple setup, no extra hardware• Improvement: Add tutorials and code explanations	<ul style="list-style-type: none">• AI insights reduce unnecessary repair costs• More value than basic OBD-II readers• Drawback: Cloud costs	<ul style="list-style-type: none">• Internally complex: data handling, DTC decoding, AI, secure cloud• Externally simple: user-friendly interface, cross-platform, real-time insights• Complexity showcases expertise

Technical Complexity



Pros



User-Friendly: Easy setup with Bluetooth, no extra hardware.



Cross-Platform: React Native app works on iOS and Android.



In-Depth Diagnostics: AI-driven insights for accurate recommendations.



Cost-Effective: Helps users avoid unnecessary repairs.



Real-Time Data: Immediate diagnostics from OBD-II to phone.



Cloud Storage: Saves diagnostic history for future reference.

Cons

- **Cloud Dependency:** Needs internet for advanced diagnostics.
- **Battery Usage:** Bluetooth and cloud may drain phone battery.
- **Subscription Model:** Premium features may have a cost.
- **Latency Risk:** Cloud processing could delay insights.
- **Bluetooth Connectivity:** Potential for occasional connection issues.