QBurst | A High AI-Q™ Company

Remote Diagnostic Tool for Automotive Telematics

Transforming wired automotive diagnostic kits into a mobile-first, scalable telematics platform for real-time vehicle health insights.

Overview

- Developed a cloud-native remote diagnostic application replacing bulky wired kits with a pocket-sized mobile tool.
- Enabled technicians to scan, diagnose, and forecast faults using real-time telematics, data analytics, and guided repair intelligence.
- Improved diagnostic efficiency and turnaround times; enhanced customer satisfaction through preventive maintenance and remote support.

Client

Based in Europe, the client is the innovation hub for a leading global automotive manufacturer, driving R&D, product engineering, and IT for premium passenger and commercial vehicles.

Challenges

- Dependency on a single wired diagnostic kit per workshop slowed service operations
- Legacy monolithic prototypes made deployments heavy (2.5 GB builds) and time-consuming
- No unified mechanism to share or sync vehicle data across multiple technicians
- Diagnosis relied solely on fault codes, ignoring customer-reported concerns and on-road symptoms

QBurst Solution: Cloud-Native Remote Diagnosis

QBurst modernized the client's prototype into a telematics-enabled, microservices-driven mobile application that allows technicians to diagnose vehicle faults anytime, anywhere.

Key Solution Elements

- Cloud-hosted microservices with auto-scaling and real-time monitoring
- PWA + mobile apps for frictionless access across iOS, Android, and browsers
- VIN scanning, guided tests, repair forecasting, and historical fault correlation
- API ecosystem enabling diagnosis from service centers and remote locations
- Multi-user collaboration with secure data syncing per vehicle case
- Compliance with EU regulatory standards for ISPs access

The deployment pipeline (CI/CD) ensured rapid, stable releases with minimal developer effort.

Implementation Highlights

- Auto-scalable backend using Kubernetes HPA
- Zero-downtime deployments with rolling updates
- Horizontal load testing for global user scale
- Secure authentication and authorization at every layer
- Data caching to mitigate quota limits and improve response times
- Prometheus, Grafana, ELK for real-time performance analytics
- Adobe Analytics & AppDynamics embedded for usage insights
- Supports 23 global languages and generates instant PDF service records

Impact: Telematics for Remote Diagnostics

- 50% faster fault resolution through guided workflows and predictive diagnostics
- Replaced large wired diagnostic kits with a portable mobile tool for every technician
- 30% reduction in service turnaround time as a result of remote pre-diagnosis
- Lower maintenance costs via remote support and preventive insights

- Higher productivity with mobile-first access anywhere, anytime
- Solution well-received by workshops and rolled out on schedule