

MICHIGAN STATE

UNIVERSITY

Project Plan Presentation

Car-net DriveView Social Competition App

The Capstone Experience

Team Volkswagen

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*From Students...
...to Professionals*

Functional Specifications

- Translate data into a fun and engaging experience
- With social competition app
- To encourage VW clients to become better drivers

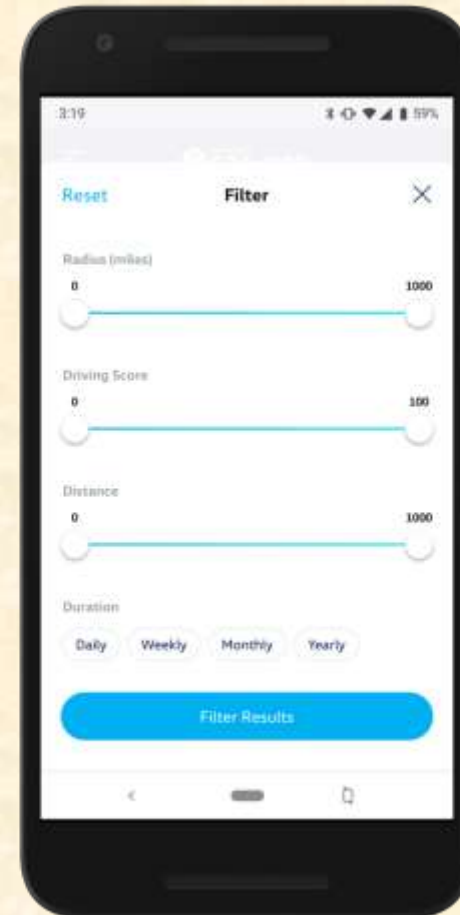
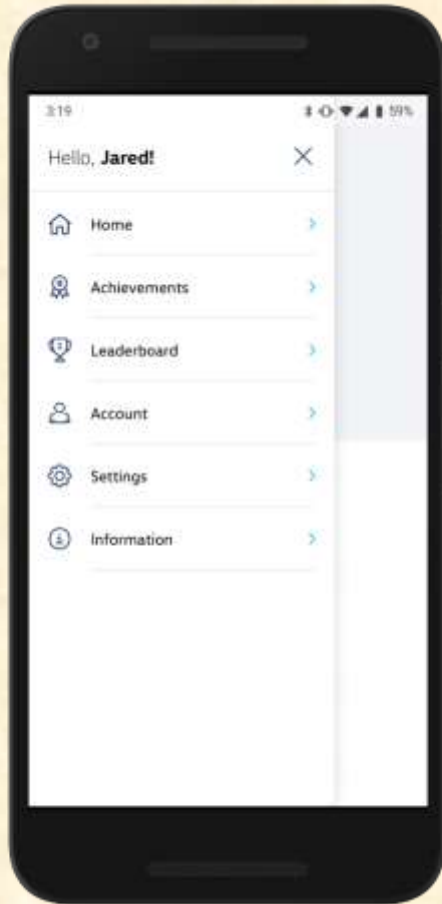


Design Specifications

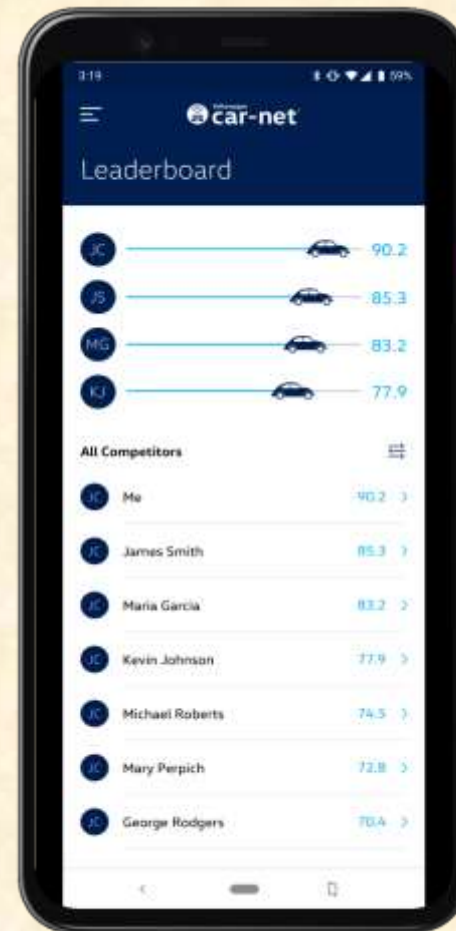
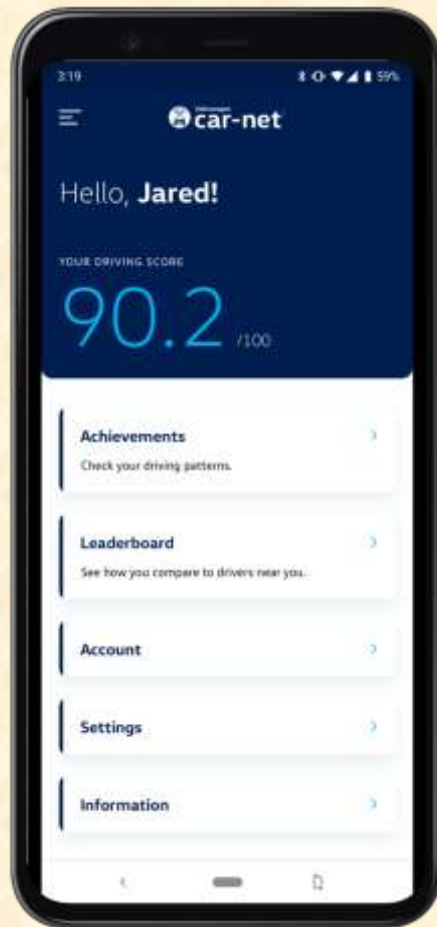
- Leaderboard to rank users based on an overall driver score
- Change parameters of the leaderboard
- Click on another user to see your head-to-head score breakdown
- Achievements the user can complete to promote safer driving
- Click on a specific achievement for more detail
- Ability to make changes to personal profile



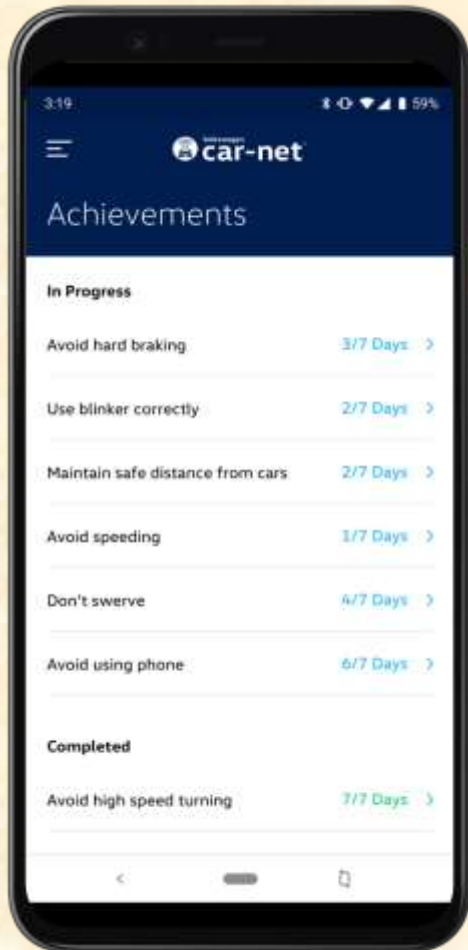
Screen Mockup: Experience



Screen Mockup: Interface



Screen Mockup: Interface

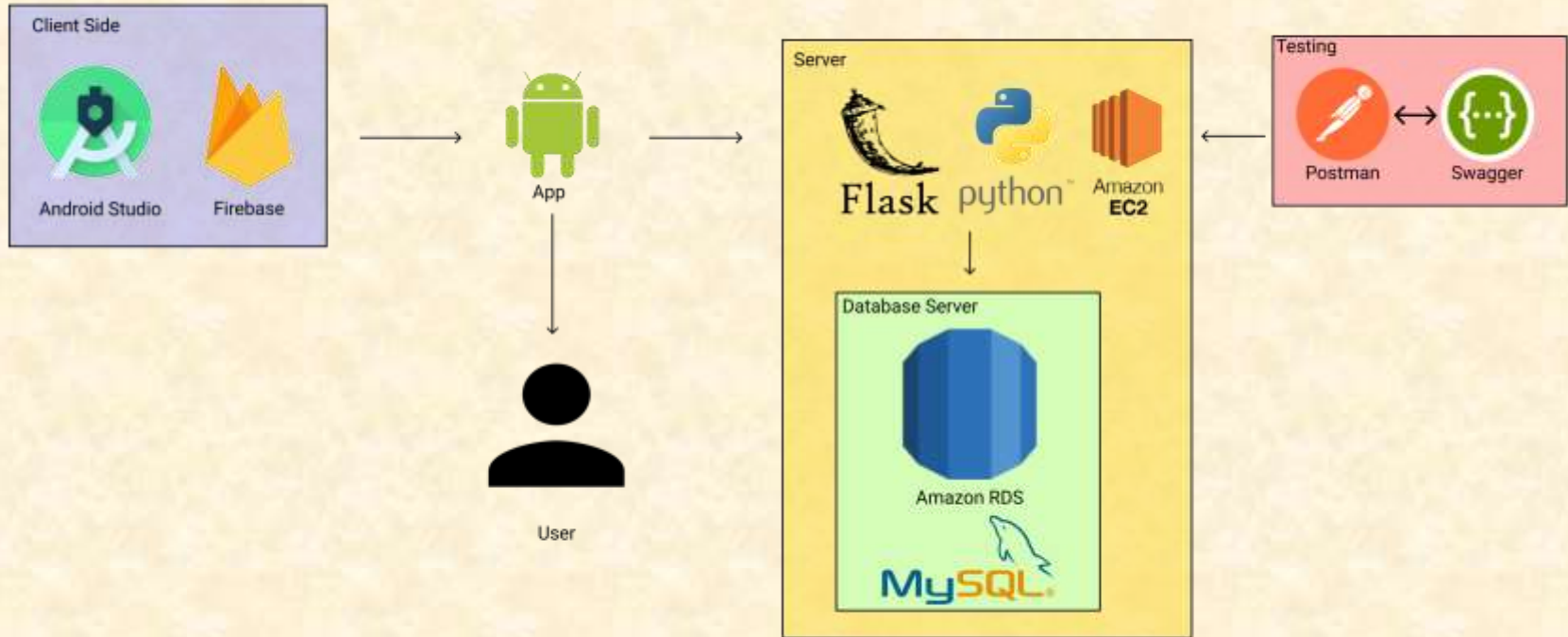


Technical Specifications

- Amazon
 - AWS Relational Database Service
 - AWS Elastic Compute Cloud
 - MySQL and Flask
- Firebase
 - User authentication
- Volkswagen App
 - Android Studio
- Swagger & Postman



System Architecture



System Components

- Hardware Platforms
 - An Android Phone
 - Android Emulator (Nexus 7 API 30)
 - Android OS (10+)
- Software Platforms / Technologies
 - Android Studio, Firebase
 - VS Code
 - Python, Flask



Risks

- Determining user score
 - Create an algorithm to determine an accurate score based on sensor data
 - Develop and test multiple solutions with sample data
- Creating a UI that works functionally and aesthetically
 - Lack of experience in Graphic Design will slow progress towards a good UI solution
 - Consult with contact at VW to assist in creating a good UI
- Data Analysis
 - Determine the best approach for parsing data from the database, as well as link the data through relations
 - Map out database layout and relations in external software for easier visual analysis



Questions?

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