#### 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

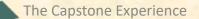
# **Design Specifications**

- 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

≥19		10.44	<b>1</b> 591
Hell	o, Jared!	×	
ଜ	Home		
8	Achievements		
Q	Leaderboard		
8	Account		
0	Settings	5	
٩	Information		

8:19			809	4117
Reset	6	Filter		×
Radio	(miles)			
8				1000
5				
Driving	g Score			
0				100
0				
Distan	00			
0				1000
0				-0
Duratio	an			
Daily	Weekly	Monthly	Yearly	
		Filter Result	8	
	4	-	D	



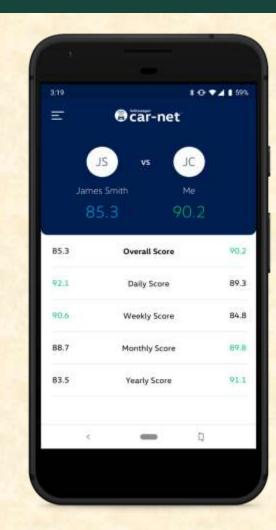
# Screen Mockup: Interface





# Screen Mockup: Interface

3:19		<b>\$ 0 ♥⊿ 1</b> 55
= 3	car-net	1
Achieveme	ents	
In Progress		
Avoid hard braking	3/7 Days	
Use blinker correctly	2/7 Days	
Maintain safe distance from cars		2/7 Days
Avoid speeding	1/7 Days	
Don't swerve	A/7 Days	
Avoid using phone	6/7 Days	
Completed		
Avoid high speed tur	ning	7/7 Days
4	-	D.

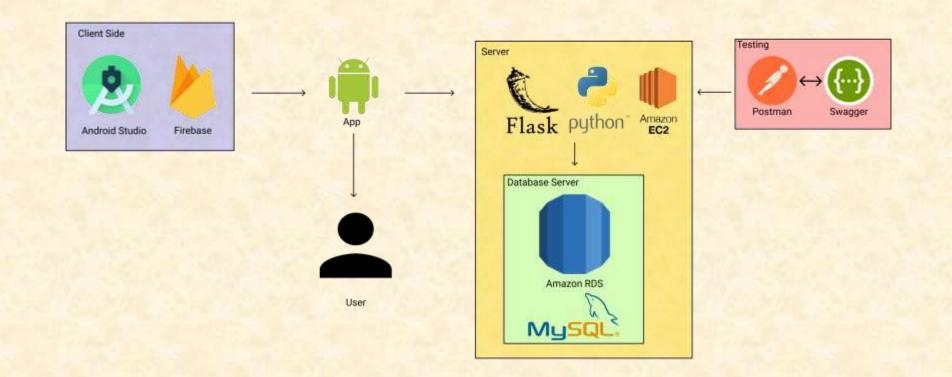


# **Technical Specifications**

#### 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?**

