MICHIGAN STATE UNIVERSITY

Project Plan

Virtual Dealership Adviser

The Capstone Experience

Team Urban Science

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From Students…
…to Professionals

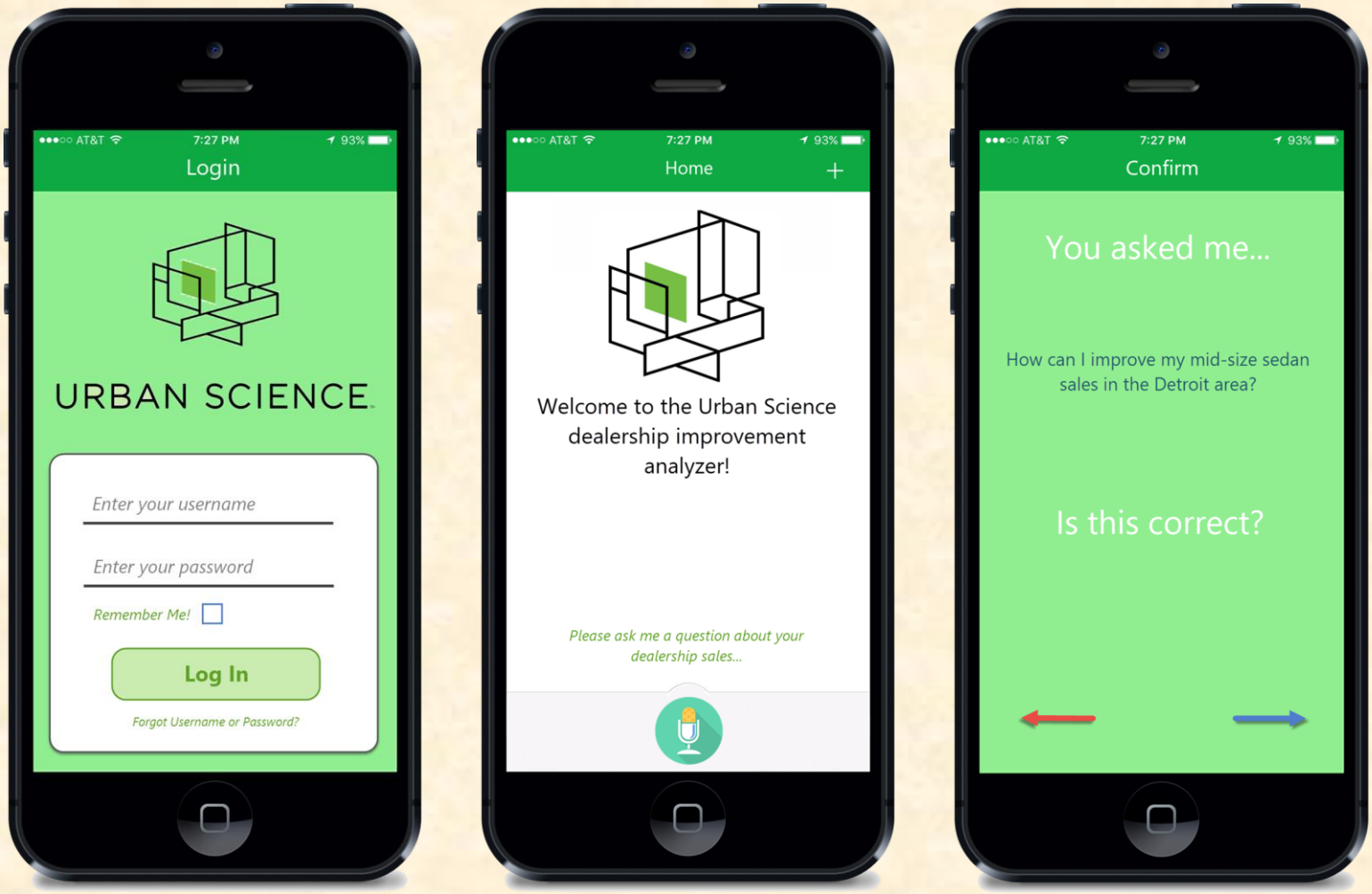
Functional Specifications

- Problem: Dealership employees currently analyze exhaustive datasets/charts to identify areas of improvement
  - Virtual Dealership Adviser will provide concise input for actionable areas of improvement
- Solutions are generated given the user's question
  - System identifies relevant Key Performance Indicators (KPIs)

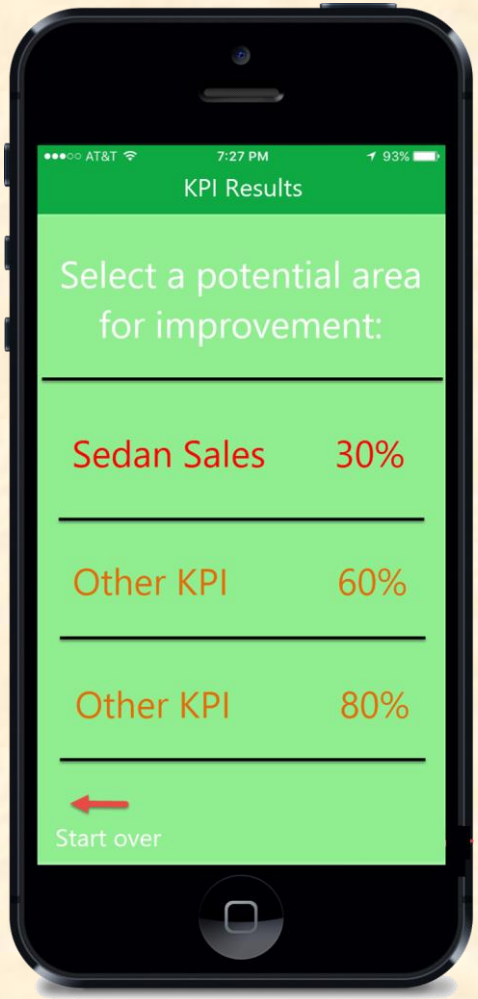
Design Specifications

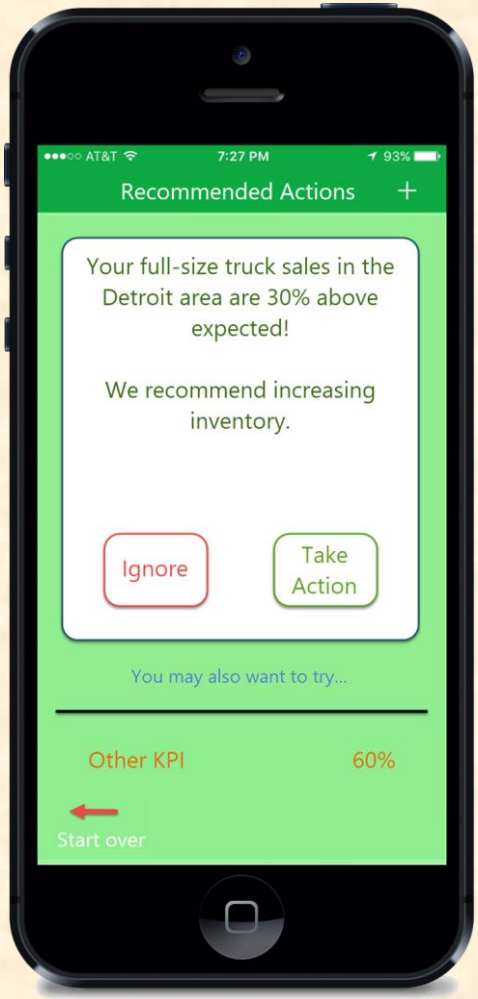
- Simplistic design for user interface
  - Ease of use
  - Minimize time spent on device
- Works well on all major mobile devices

Screen Mockup: Input



Screen Mockup: Response

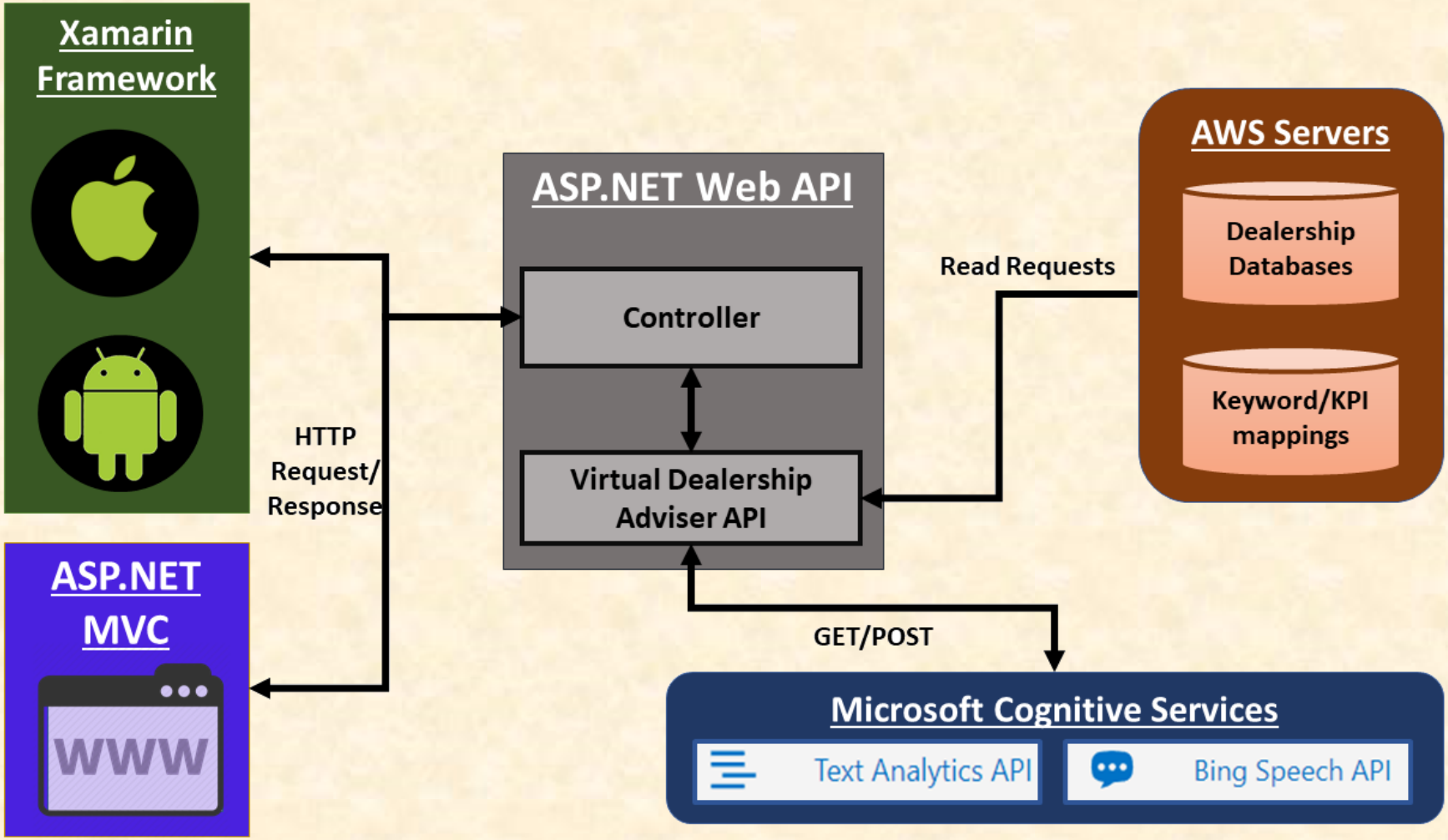




Technical Specifications

- Web application done with ASP.NET MVC
- Ranking algorithms made in ASP.NET Web API
- Xamarin.IOS, Xamarin.Android
- Database hosted with AWS
- Speech to text and NLP using Microsoft Cognitive services

System Architecture



System Components

- Hardware Platforms
  - IOS
  - Android
    - AWS Servers
- Software Platforms / Technologies
  - Xamarin
  - ASP.NET MVC
  - ASP.NET Web API
  - Microsoft Cognitive Services
  - Visual Studio 2017

Testing

- Github
- Trello
  - Issue tracking
- Visual Studio - Unit testing environment
  - Mock data from AWS servers
  - Edge Cases given by Urban Science
- Frequent Client Prototypes

Risks

- Keyword/KPI mapping
  - Accurate determination and ranking of KPIs
  - Quickly prototype and test NLP and algorithm methods
- Appropriately generating actions
  - Need to generate proper solutions to performance
  - Keep in close contact with content experts at Urban Science
- Datasets
  - We are not provided with any real data and are creating dummy data
  - Use NLP methods that won't require training on questions and results

Questions?