MICHIGAN STATE
U N I V E R S I T Y

Project Plan
AR Model Management Platform

The Capstone Experience

Team Dow

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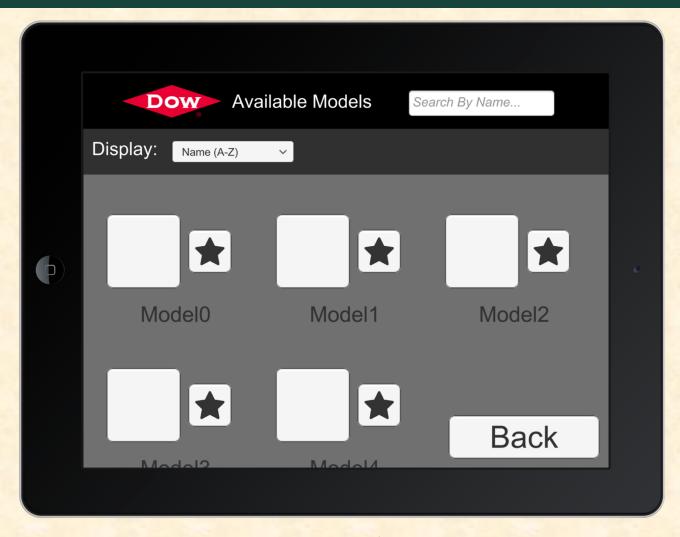*From Students…*
    …to Professionals

Functional Specifications

- Augmented Reality iOS and Android Application

- Platform Allowing Marketing Professionals to View Dow Product Models

- Models are Managed and Updated from Central Storage
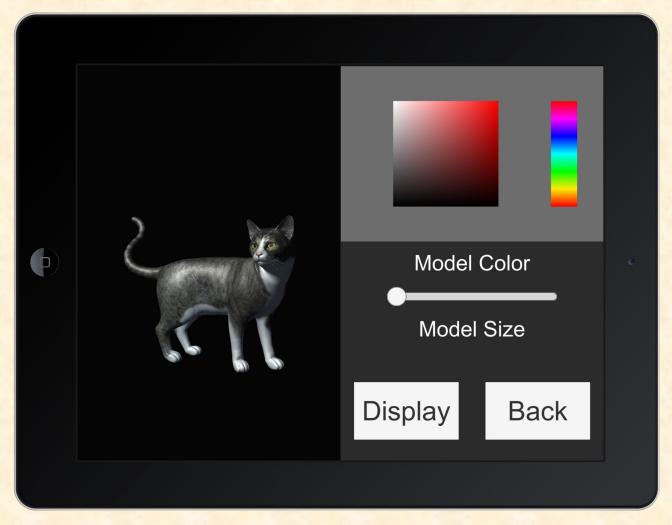
Design Specifications

- View Dow Models in AR

- View All Available Models in the Cloud

- Configure the Model's Color and Scale

- Rotate and Highlight Models

- Show User Info and User Settings

- Tutorial Screen
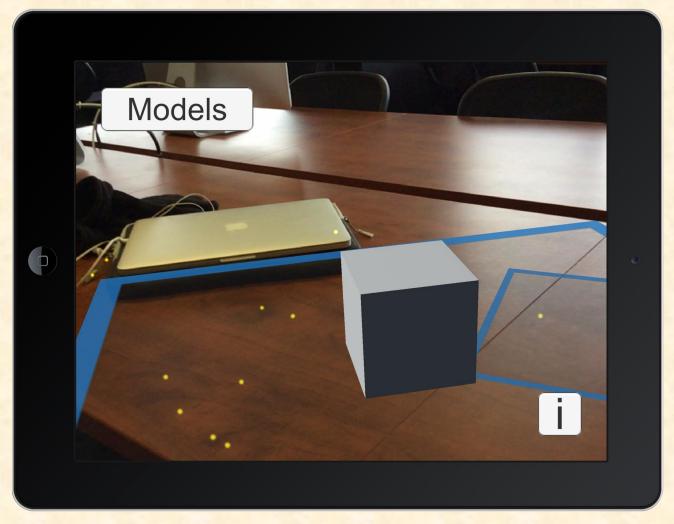
Screen Mockup: Model Selection
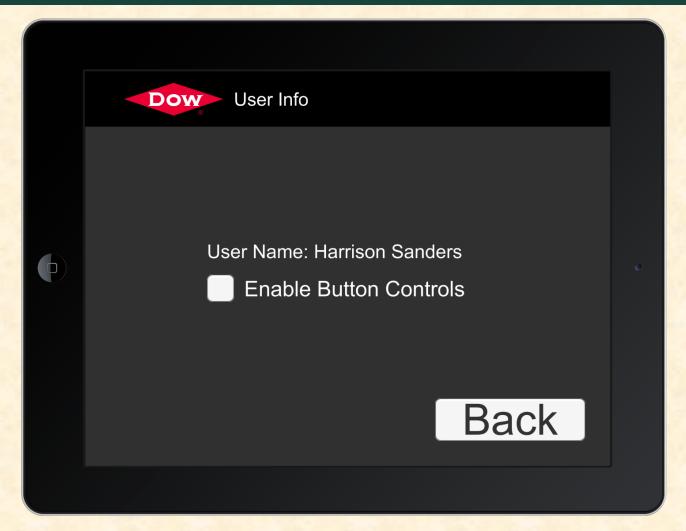
Screen Mockup: Model Configuration

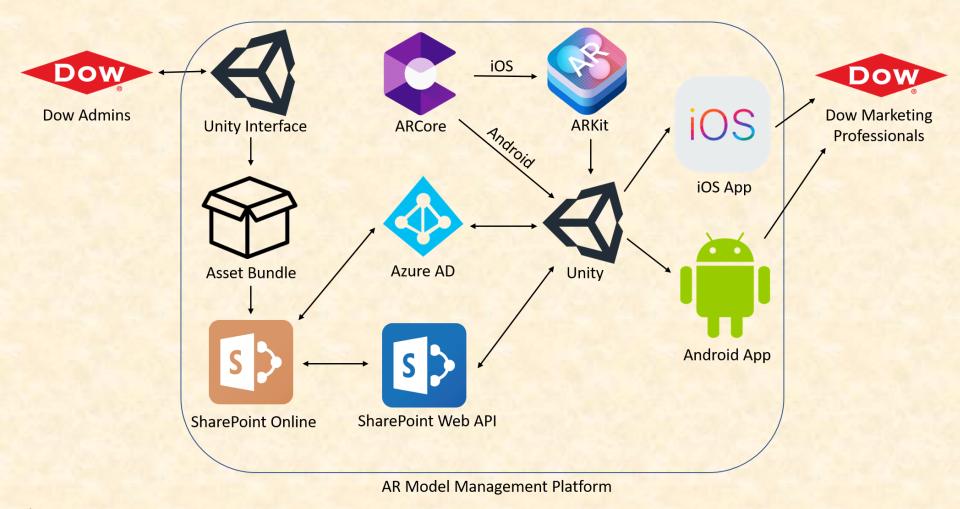# Screen Mockup: AR View

Screen Mockup: User Info

Technical Specifications

- Azure Active Directory

- SharePoint Web API

- Unity AssetBundles

- ARCore (iOS and Android) and ARKit (iOS)

- OAuth 2.0 Token Interceptor

System Architecture

AR Model Management Platform

System Components

- Hardware Platforms
  - iOS Devices
  - Android Devices

- Software Platforms / Technologies
  - iOS
  - Android
  - Unity
  - Xcode
  - C #

Risks

- Implementation of ARCore and ARKit
  - Using ARCore with ARKit and allowing for user interaction with 3D objects is a challenge
  - Mitigate by having each team member create an ARCore/ARKit app
- Storing 3D models on SharePoint
  - SharePoint needs to store large 3D models
  - Mitigate by creating a test app that pulls a 3D model from SharePoint
- Scalability on SharePoint
  - The app will be used by entirety of Dow Sales and Marketing
  - Mitigate by stress testing on SharePoint
- Safety of handling user credentials
  - Hard to keep user login info safe when there are many different access points
  - Mitigate by working with Dow on safety best practices with Azure AD

Questions?

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