



# Project Plan Presentation

## Injury and Damage Data Quick Access App

The Capstone Experience

Team United Airlines Airport Operations

Hargun Atwal

Joseph Chen

Elizabeth DeBack

Emmanuel Marudo

Grace Mora



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

Department of Computer Science and Engineering  
Michigan State University

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# Project Sponsor Overview

- Headquartered: Chicago, IL
- Founded 1926 in Boise, Idaho
- Publicly traded international airline
  - Top 5 Airline by Revenue
  - 2019 Revenue: \$40.8B



# Functional Specifications

- United Airlines wants to increase safety measures
  - **Problem:** Current system is web-based containing excessive data
  - **Solution:** Mobile app that displays information quick
- IDDQA App has multiple benefits and perks
  - Access information about damages and injuries in separate sections
  - Filter data results under multiple conditions
    - Range of dates, OSHA, # of investigations, seniority, etc.
- Results are accessible via email sharing
- Application is available on both iOS and Android Systems



# Design Specifications

- Home Menu
  - Contains two buttons: Injury and Damage
  - Each option brings the user to specific filters
- Injury Filter
  - Designed to refine the injury incident(s) the user is looking for
- Damage Filter
  - Designed to refine the damage incident(s) the user is looking for
- Feedback Window
  - Displays the number of incidents that occurred year by year
  - Provides the option to view the filter options selected
  - Provides the option to share the outputted data via email



# Screen Mockup: Home Menu



iOS



Android



# Screen Mockup: Damage Filter

The iOS mockup features a black header with the title "Damage". Below the header is a blue "Home" button. The main content area contains several filter sections: "Date Range:" with two date pickers showing "05/07/2001" and "08/29/2007"; "Seniority Range:" with two pickers showing "Lowest: <1 year" and "Highest: 5 ye..."; "Investigation Totals: 2"; "Station: ORD"; and "Damage Type: Left Wing". Each section has a right-pointing arrow. At the bottom is a blue "Filter" button.

iOS

The Android mockup features a black header with the title "Damage". Below the header is a blue "Home" button. The main content area contains several filter sections: "Date Range:" with two date pickers showing "05/07/2001" and "08/29/2007"; "Seniority Range:" with two pickers showing "Lowest: <1 year" and "Highest: 5 ye..."; "Investigation Totals: 2"; "Station: ORD"; and "Damage Type: Left Wing". Each section has a right-pointing arrow. At the bottom is a blue "Filter" button.

Android

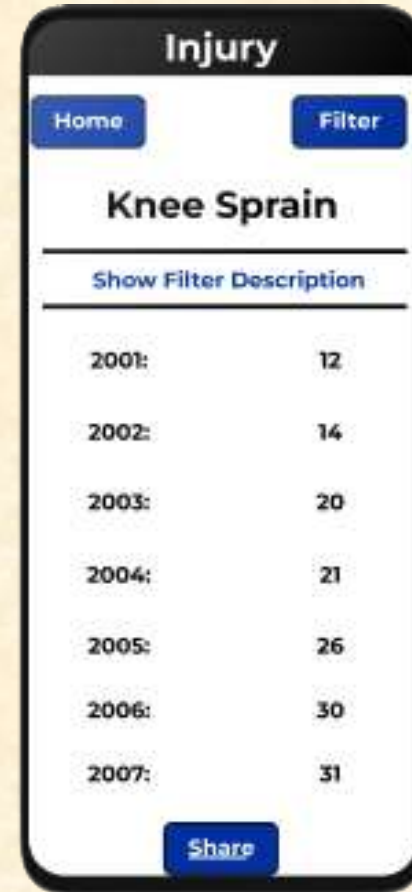




# Screen Mockup: Injury Report



iOS



Android



# Screen Mockup: Damage Report



iOS



Android





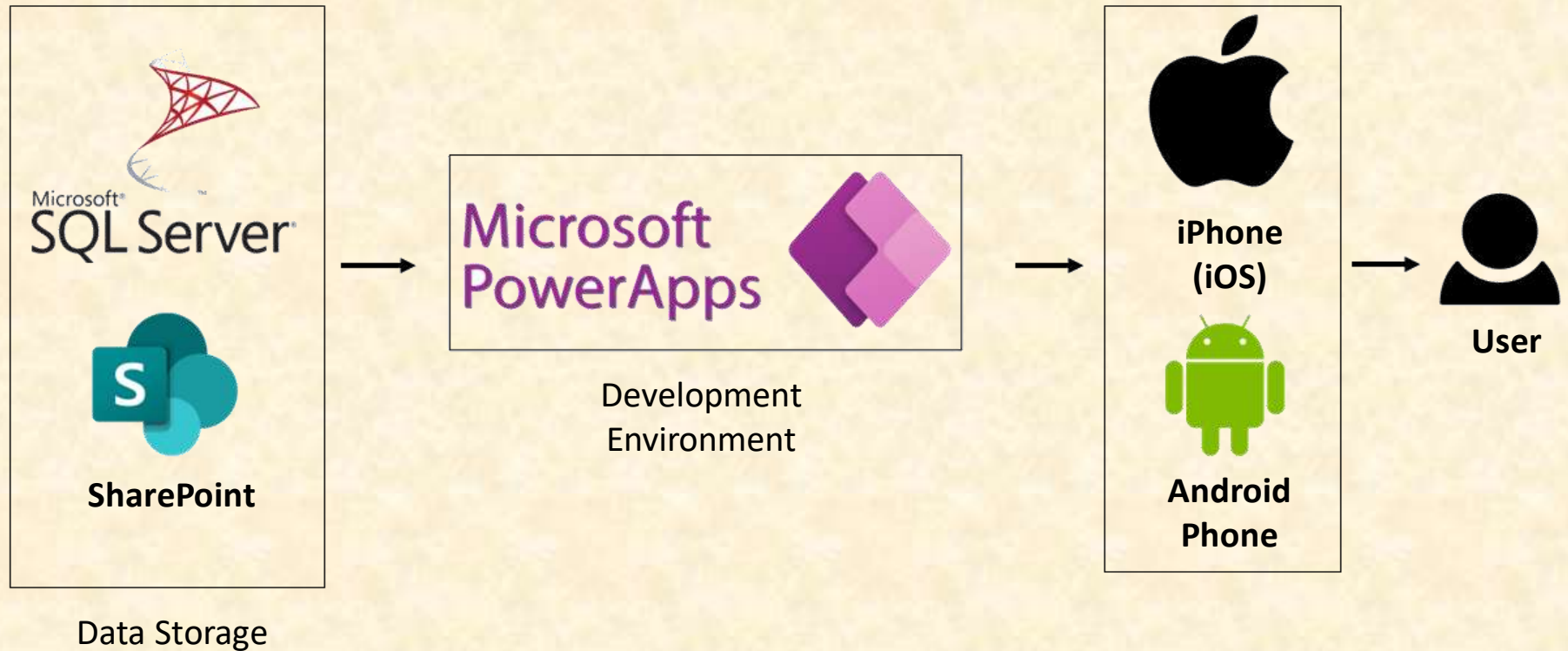
# Technical Specifications

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- Mobile Application
  - Access on personal phones
- Microsoft Power Apps
  - Frontend
  - Backend
  - Deployment
- Client Data
  - SQL Server
  - SharePoint Data
- Data sharing via email



# System Architecture



# System Components

- Hardware Platforms
  - Android Phone
  - Apple iPhone (iOS)
- Software Platforms / Technologies
  - Microsoft Power Apps
    - Seamless integration with data access points
    - Trivial deployment
    - Increased security
    - Need Wi-Fi connection for all development
  - Client databases
    - SQL Server – access with service account
    - SharePoint Data



# Risks

- Connecting Application to Different Databases
  - Need to connect and merge data from a SQL server and SharePoint, data could be inaccurate
  - Mitigation: Continuously test and compare results from application with Client's web application results
- Data Visualization
  - How our data will be displayed is still unknown
  - Mitigation: Connect with Client and present multiple different visualizations via mockups
- Behavior of Application
  - How the application will behave after the data report is shared is still unknown
  - Mitigation: Connect with Client to decide what behavior would be the most appropriate for the application users



# Questions?

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