Alpha Presentation
Gate Hazard Geo-Mapping

The Capstone Experience
Team United Airlines Airport Operations

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Fall 2021
Project Overview

• United Airlines is a leading American airline headquartered in Chicago, Illinois.
• United Airlines Safety & Compliance staff record data on hazards faced at each airport gate.
• Our software unifies the hazard-data recording process, visualization, and allows geo-mapping of the entries.
• This is accomplished through an Android and iOS mobile app, as well as a website.
System Architecture

Applications

User

Xamarin SDK

iPhone Application

iOS

Android

TC75 Application

Web App

WWW

php

Server-Side

phpMyAdmin

phpMyAdmin Server hosted by MSU

MySQL

MySQL Database

PHP Backend

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Main Map View
Hazard List View

- **FWD pit access**
  - Last Revised: 10-14-2021
  - Map: 1
  - Risk Rank: 3
  - Affected Departments: CG, SOC, MT

- **Supertugs blocked**
  - Last Revised: 10-12-2021
  - Map: 2
  - Risk Rank: 3
  - Affected Departments: MT

- **Fire lane**
  - Last Revised: 10-14-2021
  - Map: 3
  - Risk Rank: 2
  - Keep access to the fire lane/no parking area clear at all times.
Edit & History Pages

![Edit Hazard Screen](image1)

- **fire lane**:
  - Keep access to the fire lane/no parking area clear at all times.

![Supertugs blocked](image2)

- **Supertugs blocked**:
  - **DateTime UTC**
    - MM-DD-YYYY
    - HH:MM:SS
  - **Description**
    - 10-12-2021 15:55:52: Title updated
    - 10-12-2021 15:55:45: Position updated
    - 10-12-2021 15:55:41: Hazard was created
Website – Add Hazard Page
What’s left to do?

- Custom pins on iOS
- CSV upload error handling
- CSV upload change log implementation
- Printing tables on website
- Login on mobile and website
- Mitigate against any SQL injections
Questions?