From Students…
…to Professionals

MICHIGAN STATE UNIVERSITY

Beta Presentation
Training Scheduling and Optimization System II
The Capstone Experience
Team United Airlines

Laura Danila
Andrew Ferguson
Josh Pezeshki
Jack Soenke

Department of Computer Science and Engineering
Michigan State University
Fall 2019
Project Overview

• Update and enhance the training scheduling system from the spring semester
• Implement an optimizer to recommend a schedule based off different priorities
• Expand the functionality of the application’s calendars to include filtering, a course calendar, and more
• Highlight scheduled classes that have conflicting resources with other classes
System Architecture

Clients

PC User

Mobile User

Azure Cloud Platform

Front End UI

HTML
CSS
JS

Back End API

.NET Core
C#

Azure SQL Database

Microsoft SQL Server

Data Source
Calendar Pop Outs
Schedule Optimizer – 1 of 2

The Capstone Experience

Team United Airlines Beta Presentation
The Capstone Experience

Team United Airlines Beta Presentation

Schedule Optimizer – 2 of 2
Schedule Conflict Alerts

The image shows a screenshot of a scheduling system interface. The interface includes a table with columns for Action, Course Code, Course Title, Start Date/Time, Created At, Location, Room, Point, and Supervisor. It highlights potential conflicts and shows instructor availability.

- **Course Code**: ULT2
- **Course Title**: Ultrasonic Theory (Practical) [16]
- **Start Date/Time**: 1/1/20, 08:00:00
- **Created At**: 012ort
- **Location**: DEN
- **Room**: Ptc - A001

Potential conflicts are marked with red icons and text indicating availability issues.
What’s left to do?

- Continue testing and improving the run time for the optimizer
- Finish additional modifications to OAM authentication
- Verify Internet Explorer 11 compatibility
- Add resource conflict highlighting to calendars
Questions?