

MICHIGAN STATE

U N I V E R S I T Y

Project Plan Presentation

Airline Passenger and Baggage Application

The Capstone Experience

Team United Airlines Airport Operations

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

Project Sponsor Overview

- United Airlines
- Chicago, Illinois (ORD)
- Fortune 500 Company



Project Functional Specifications

- Train United Airlines personnel on the passenger and baggage boarding process
- Test users' attentiveness with bags/passengers intended for different terminals
- Administrative access available for viewing metrics of all users

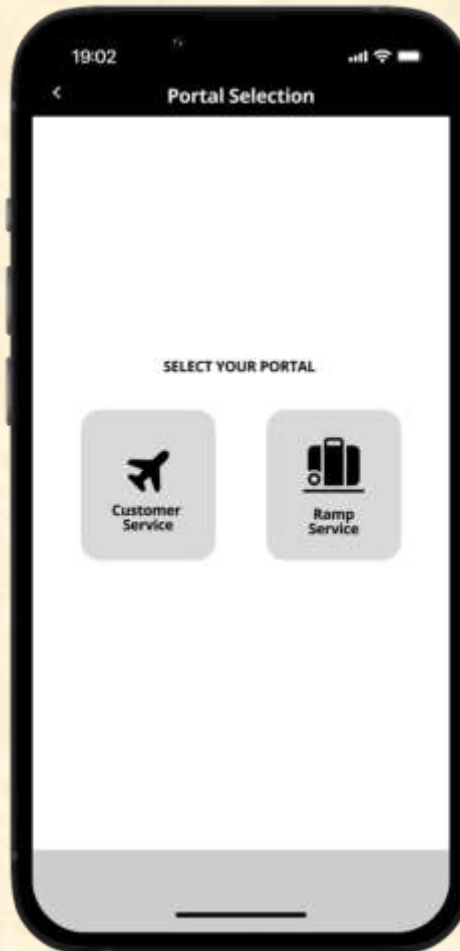


Project Design Specifications

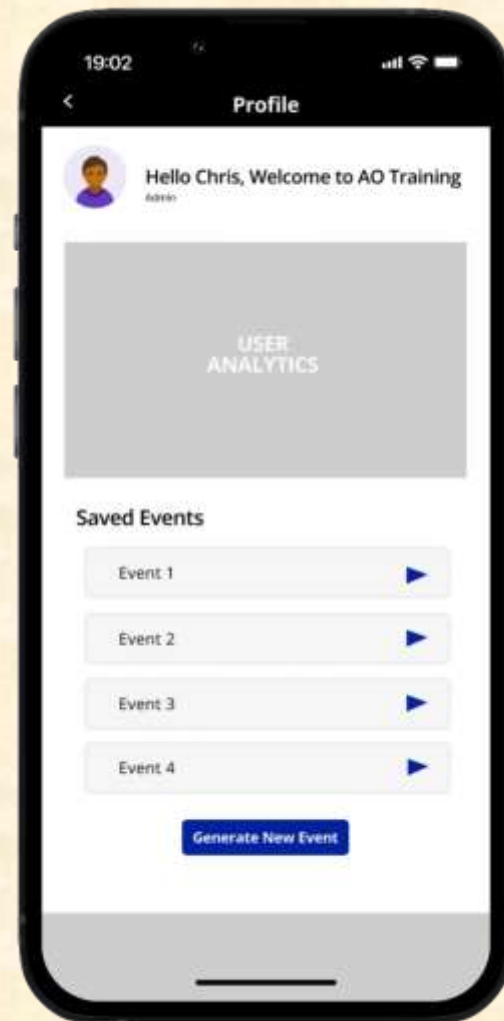
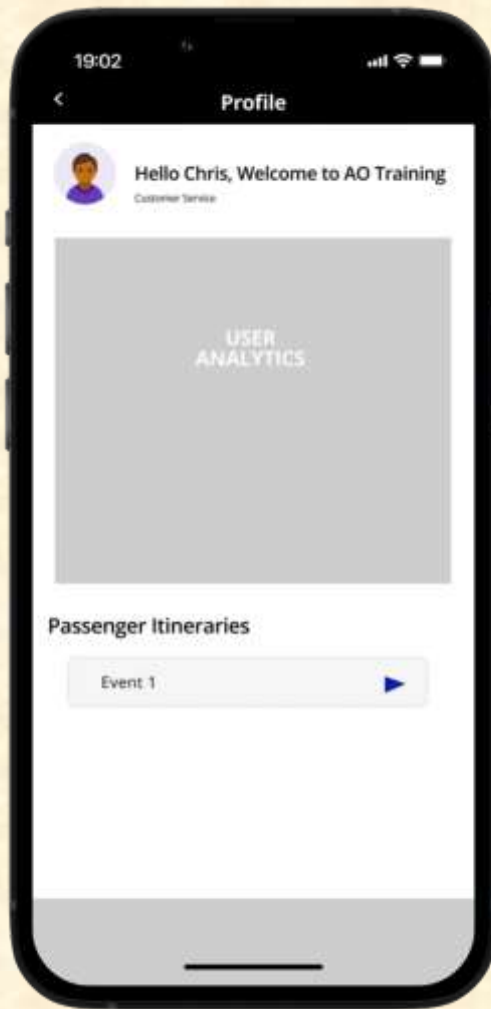
- Accessible on primarily Web, IOS, and Android platforms
- Interactive training experience for customer and ramp services employees
- Administrative control allows for the creation and selection of training data for event usage
- Similar UI interface for both admin and non-admin users



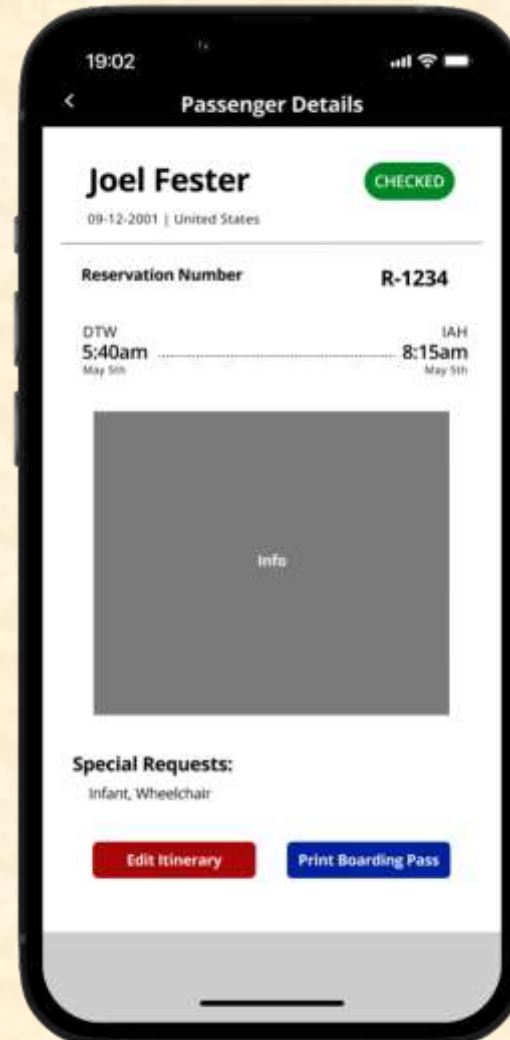
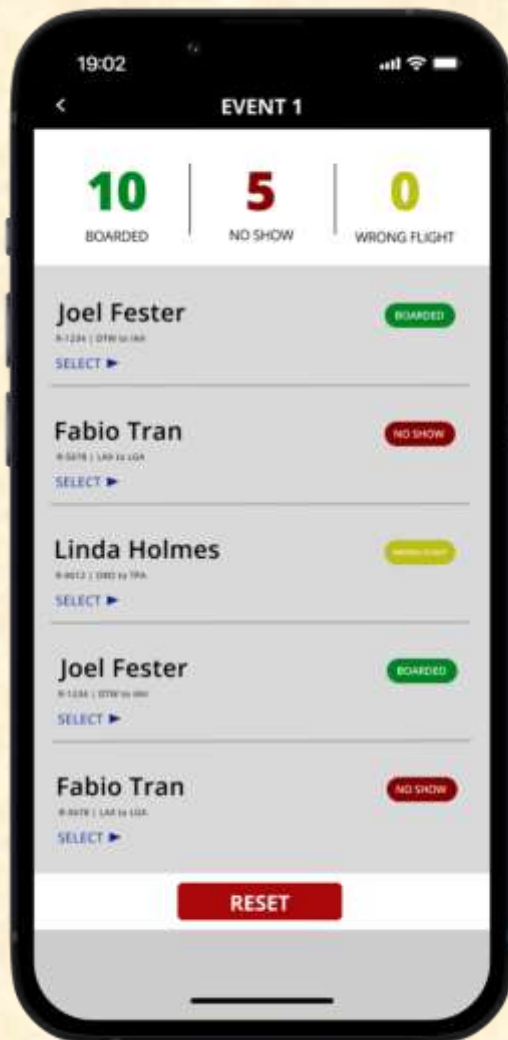
Screen Mockup: Portal Selection



Screen Mockup: User Profiles



Screen Mockup: Event Itinerary and Passenger Details

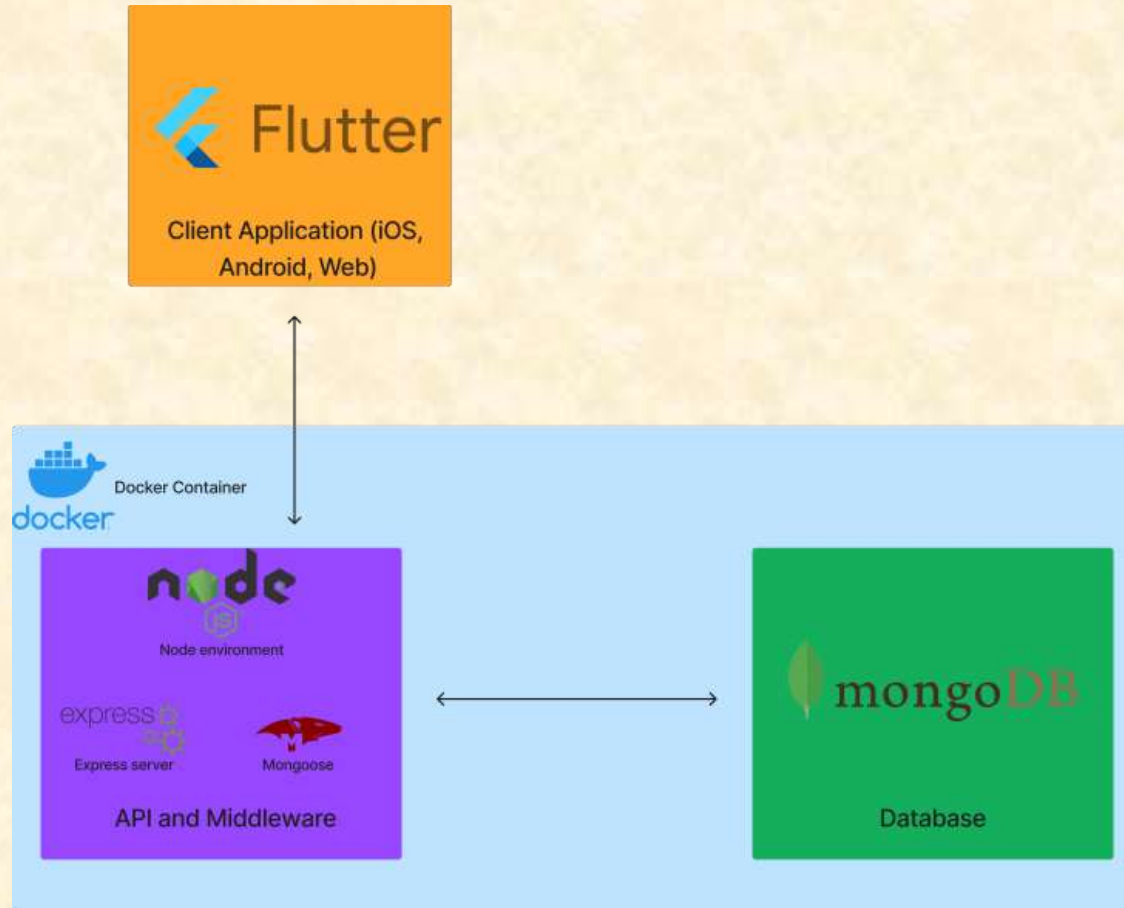


Project Technical Specifications

- View performance metrics across multiple devices
- Statically store passengers and pseudo-randomly generate new passengers
- Generate scannable QR codes for passenger baggage and flight info
- Scan tickets with webcam or hardware camera on mobile devices



Project System Architecture



Project System Components

- Hardware Platforms
 - iOS Phones
 - Android Phones
 - Web
- Software Platforms / Technologies
 - Node.js backend with library support
 - Flutter/Dart frontend with library support
 - MongoDB as our database via Mongoose
 - Awaiting confirmation on desired app host platform



Project Risks

- Risk 1
 - Use of a varied tech stack with multiple development kits/libraries creating complexity
 - Extensive testing to ensure intended functionalities
 - Risk 2
 - Synchronization of data and experience between clients on multiple platforms
 - Utilization of proper backend tools to ensure synchronized experience
- Risk 3
 - Consistency of language and flow between application views
 - Keep familiar application flow and consult with client to ensure proper implementation of client vision
- Risk 4
 - Maintaining design simplicity and ease of use
 - Thorough documentation and well-informed design choices



Questions?

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