MICHIGAN STATE UNIVERSITY

Alpha Presentation

Aviation Maintenance & Ground Ops Simulation

The Capstone Experience

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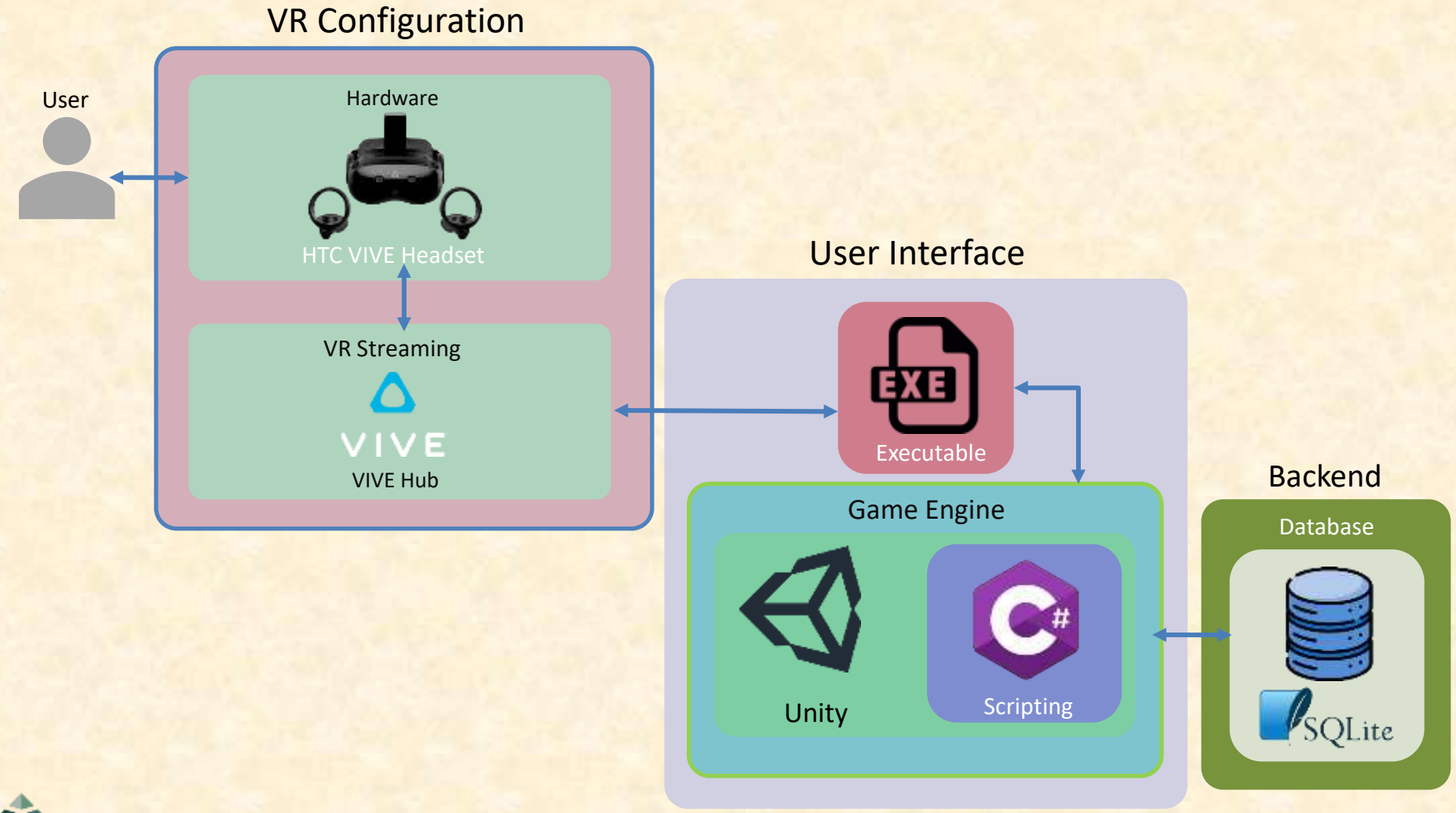
Spring 2026

From Students…
…to Professionals

Project Overview

- VR Simulation
- Gamified Training for Ground Crew
- Realistic and Risk-Free Environment
- Tutorial and Testing Mode

System Architecture



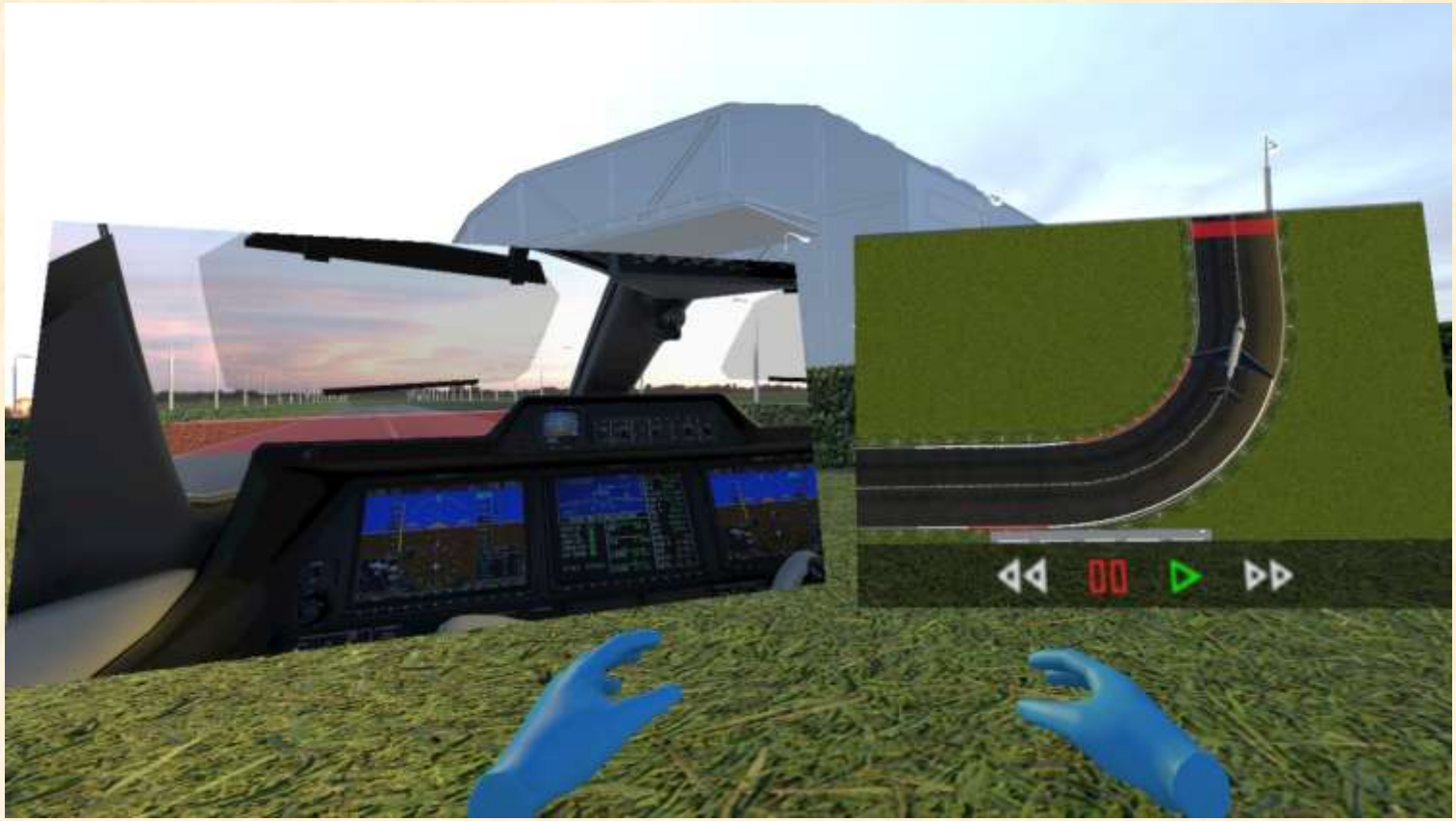
Tire Change



Wing Growth - Skills Test



Wing Growth - Results Review



Aircraft Marshalling



What's left to do?

- General
  - Tutorial / scoring modes
  - Connecting all the scenes together
  - Failure mode feedback for users
- Core scenario features:
  - Marshalling:
    - Finish marshalling signals
    - Initial instructions
  - Tire Change:
    - Reference manuals
    - NPC interruption
- Polishing
  - Sound effects
  - Haptic feedback
  - Bug fixes
  - Lighting



Questions?

