MICHIGAN STATE UNIVERSITY

Alpha Presentation

Networked CV Algorithm Testing Harness

The Capstone Experience

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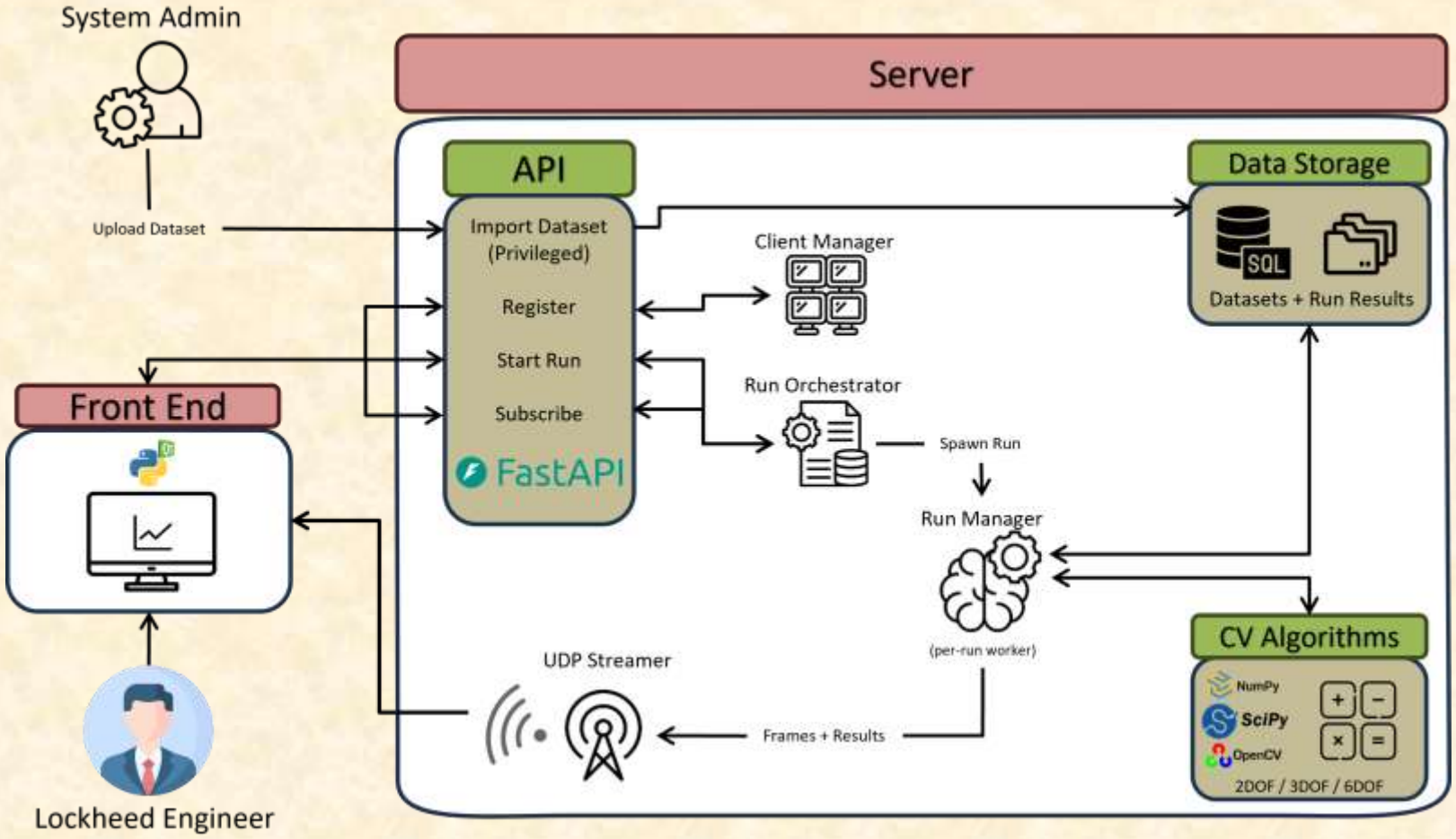


From Students…
…to Professionals

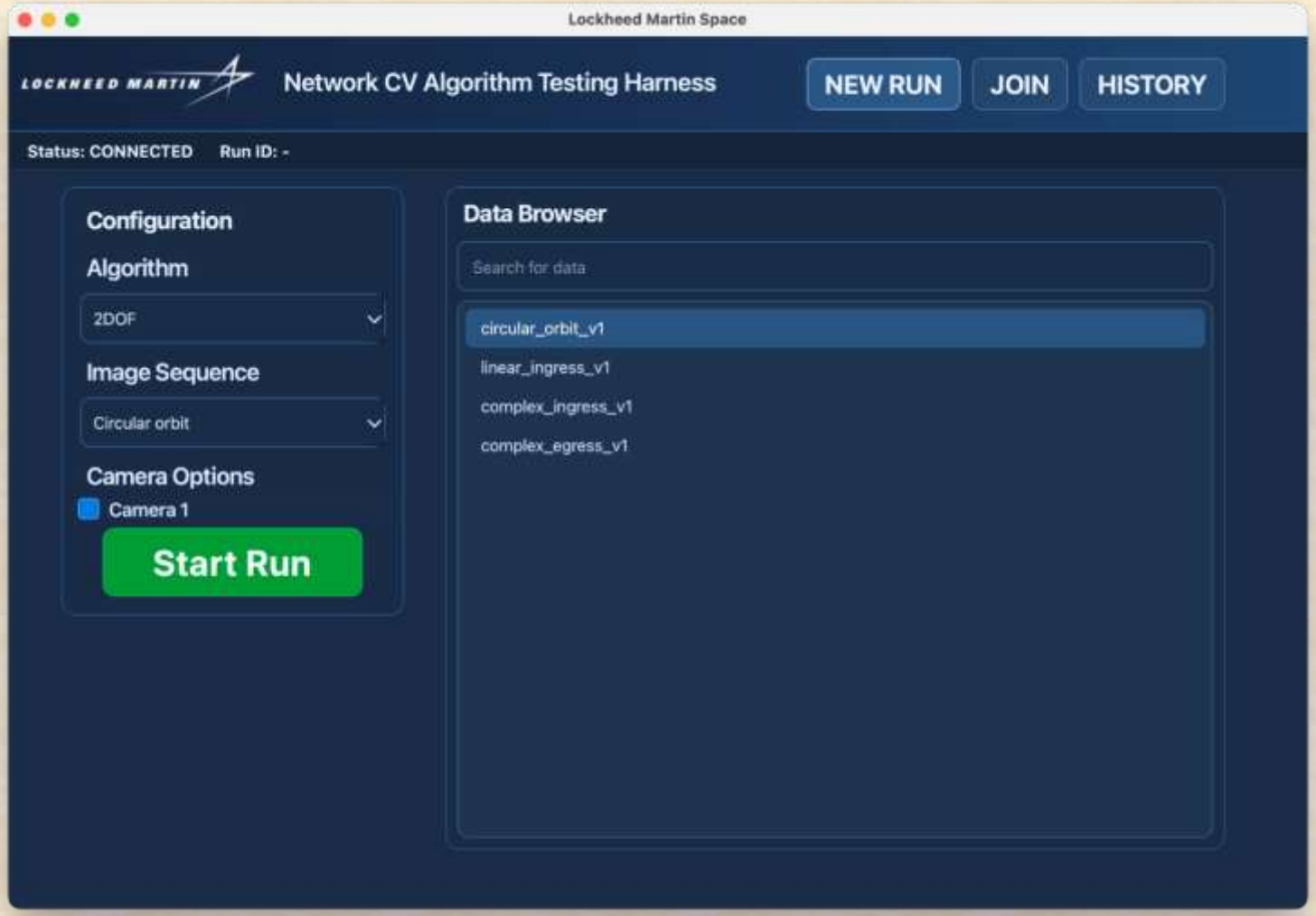
Project Overview

- CV testing is expensive and hard to reproduce
- Unified harness to:
  - Stream imagery
  - Run algorithms
  - Visualize outputs
- Benchmarks accuracy against ground truth with error metrics/graphs
- Engineers can replay runs and compare performance over time

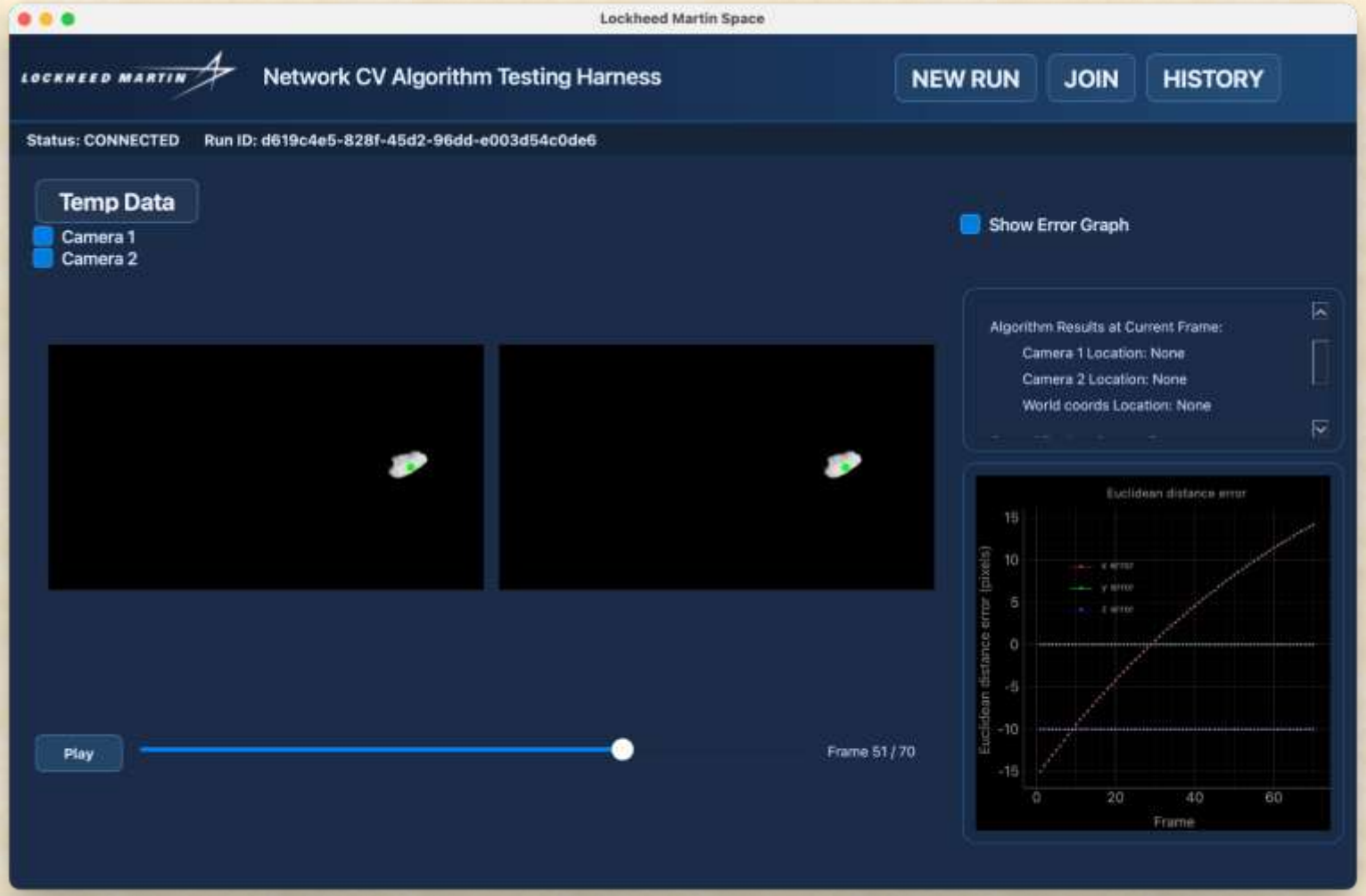
System Architecture



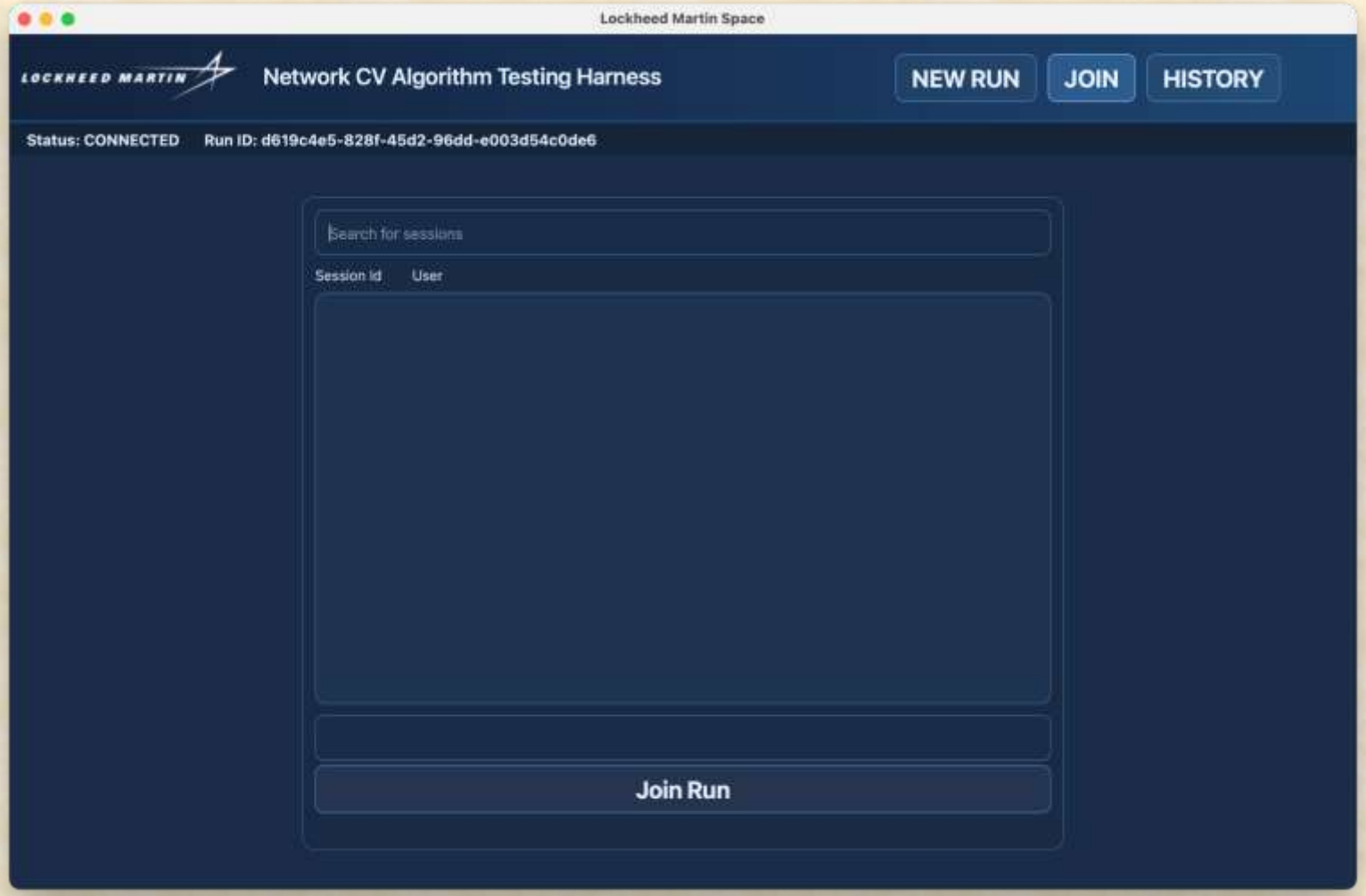
Screen Mockup: Starting a Run



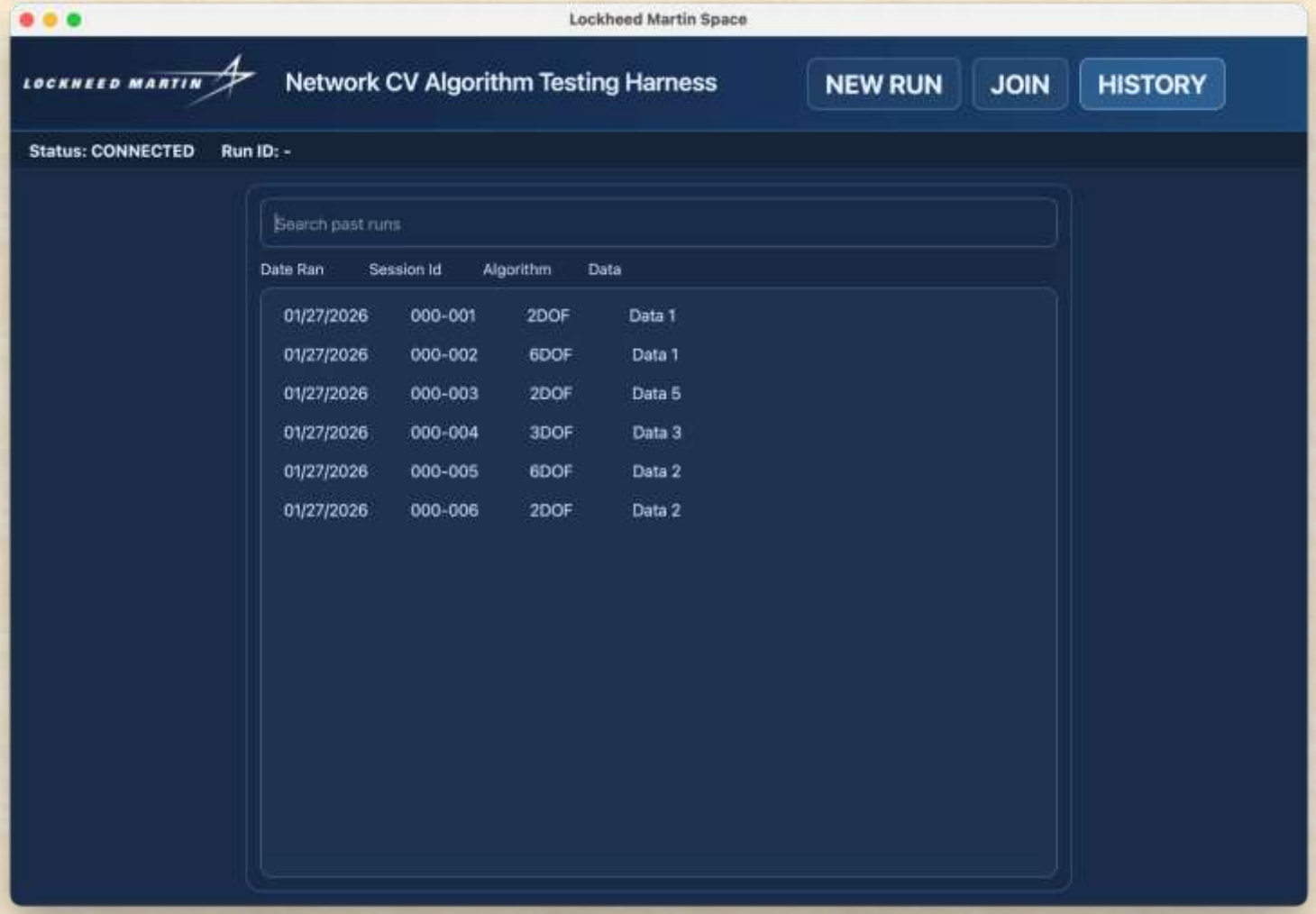
Screen Mockup: During a Run



Screen Mockup: Joining a Session



Screen Mockup: View History



What's left to do?

- Improve 6DOF accuracy across all approaches
- Minor UI updates
- Improve run caching to avoid unnecessary reprocessing
- Supporting saving run frames and results for offline replay
- Stretch Goals
  - Back projecting points into 3D space
  - Supporting 3D visualization



Questions?

