18549 Team 7: Omnioculars

Testing & Quality Assurance
Project: Omnioculars
- Magnified vision with action replay and slow motion

Parts
- Ordered additional parts

Software
- Experimenting with various action replay techniques

Division of labor
- Software: Sanchit & Vishal
- Hardware: Paraj
- Testing & QA: Sashank
Experimentation Plan

- Initialization Test:
  - Test for delay on startup
    - Vary the time gap between recording and displaying the video

- Slow Motion Test:
  - Make sure that rate stays the same overtime
    - Slow motion for a stopwatch while comparing with the live stopwatch

- Concurrency Test:
  - Recording rate is not slowed down due to display
    - Compare FPS with and without display
Experimentation Plan

- **Fast Forwarding and Rewind Testing:**
  - Test this particular implementation of slow motion for edge cases
    - Look for limits to rewinding and smooth recovery from fast forwarding too much

- **Black Box Test:**
  - Go to a Tartans game!
Risks & Mitigation

**Risks**
- Lag
- Video Quality
- Memory
- Battery: Weight and Duration

**Mitigation**
- Improve algorithm. Worst case: try for a faster board.
- Better webcam. Budget left if required.
- Ordered 32GB. Can limit action replay duration.
- Currently plan to use AAs. Can order if required.
Next Steps

- Include ordered parts
- Reduce time lag (maybe due to capture FPS)
- Include monocular as lens
- Integrating hardware and software
Thank you

Questions?