LeapArm

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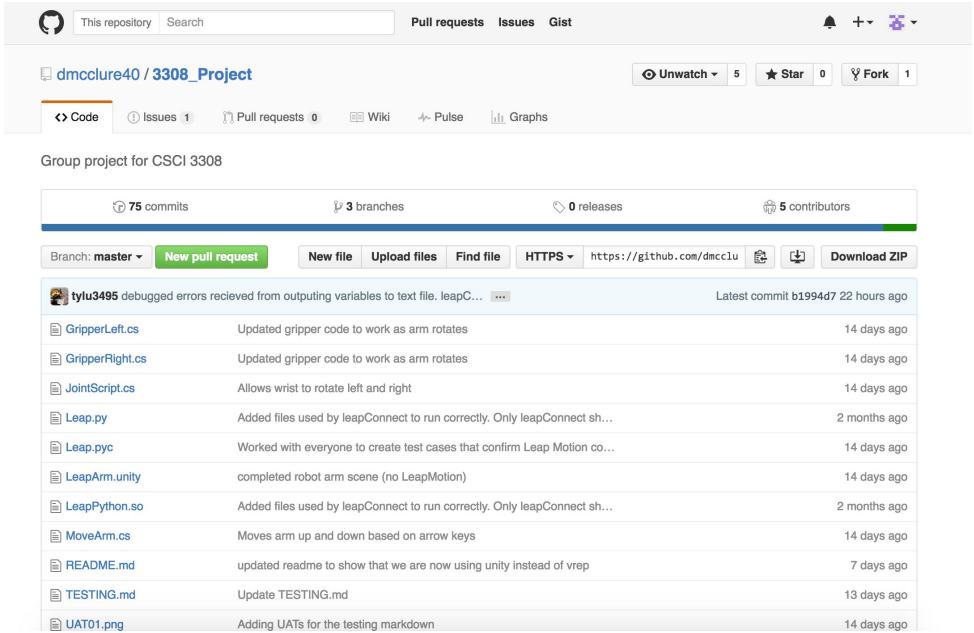
Tools - GitHub



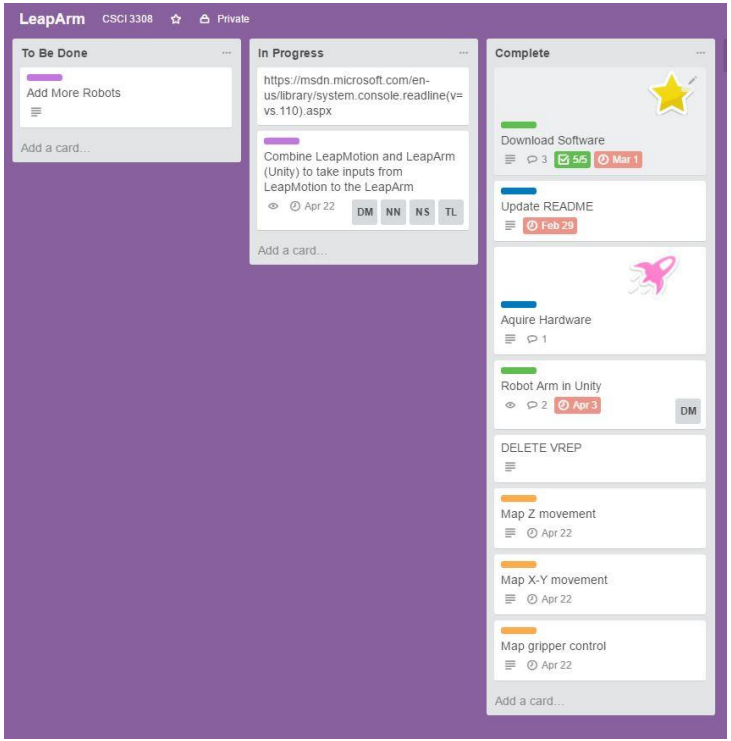
Purpose:

- Code hosting and sharing
- Track changes in code without needing to ask partners.

Rating:

- 5/5 for code sharing easiness

Tools - Trello



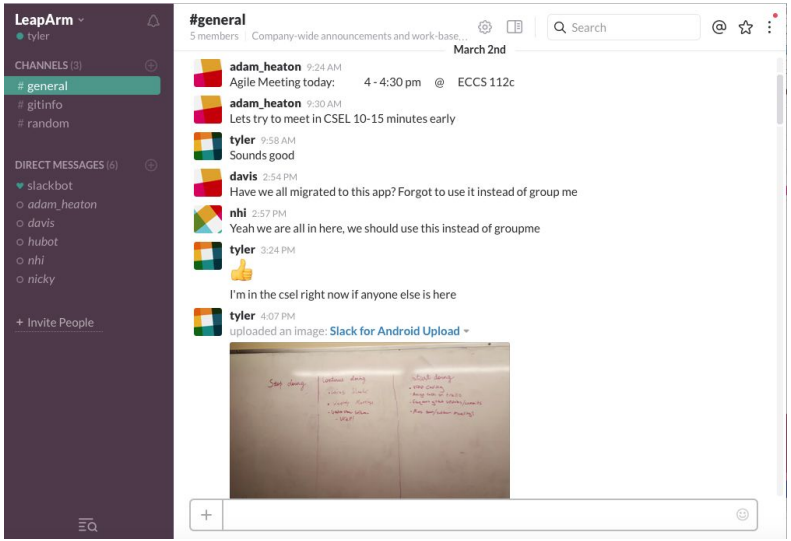
Purpose:

- Serve as a project tracking tool.
- Set benchmarks and assign people/pairs to certain tasks.

Rating:

- 4/5 for team usage

Tools - Slack



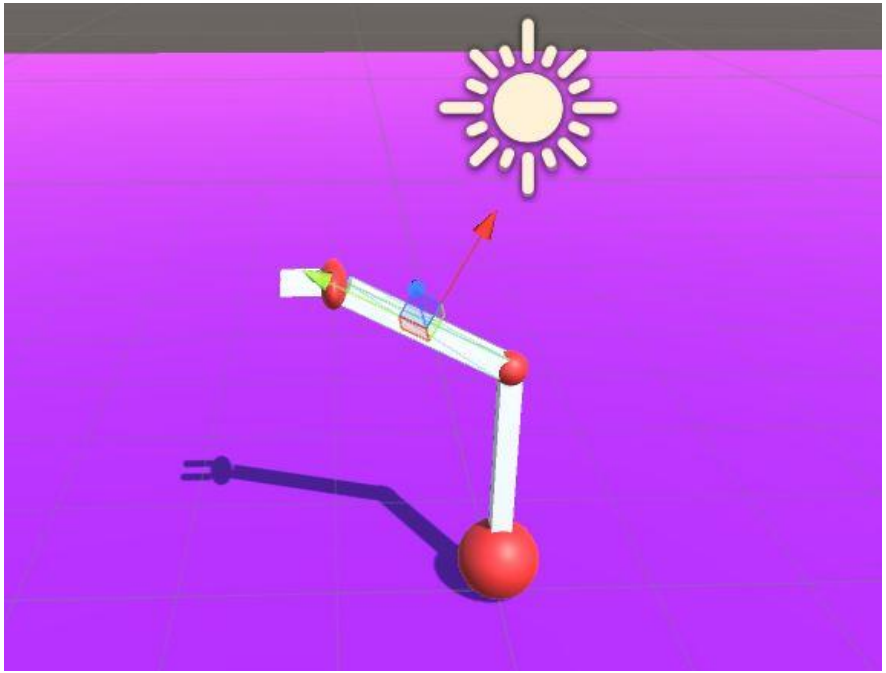
Purpose:

- Team communication
- Trello and Github notifications

Rating:

- 5/5 for simplicity, efficiency, and visual appeal

Tools - Unity



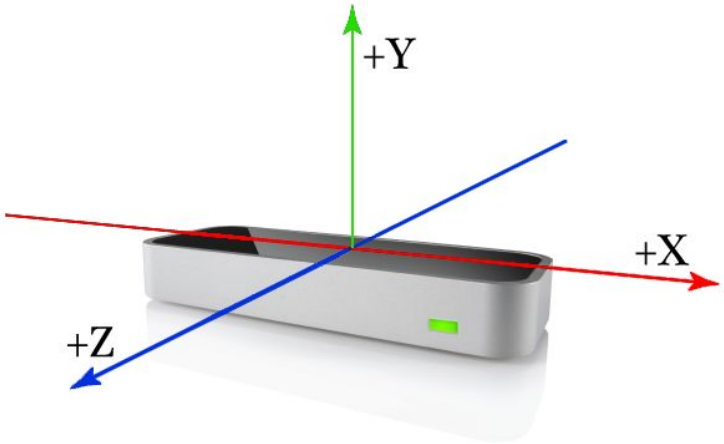
Purpose:

- Simulation of robotic arm.
- Accept Leap Motion inputs

Rating:

- 4/5 efficient to use for our simulation requirements.

Tools - Leap Motion API



Purpose:

- Motion controller that accepts hand motions as input
- Python program returned outputs to a text file

Rating:

- 5/5 Well documented with a lot of example code

Tools - Sphinx

Purpose:

- Used for automatically documenting python code
- Create HTML documentation for leapConnect.py script

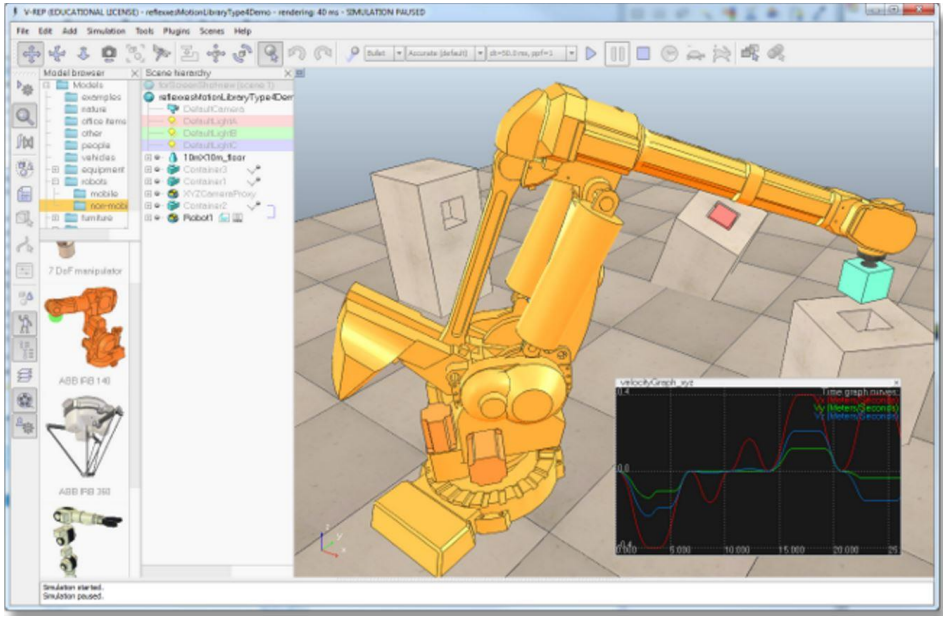
Rating:

- 4/5 for ease of use but it was difficult to learn

Methodologies

- Pair programming
  - Used for all of our Leap Motion and Unity scripts
- Agile Sprints
  - Used to complete phases of project in month long sprints

Challenges Encountered



- Modeling the arm (V-REP)
  - Few documentation and usage examples
- Connecting Unity and Leap Motion
  - Issues having the two communicate in real time

LeapArm Demo