

Project Checklist

Commitment:

- Working physical paddles (Nick)
- Isolate players from green screen (Mike)
 - Get RGB values from NTSC camera
 - Achieve RGB to HSV conversion
 - Create interface to debug and set thresholds for chroma keying
 - Pipe line all the things
- Locate paddles (Nick)
 - Use brightness (V) from HSV to set cutoffs for LED detection
- Balls returned as if the paddle was flat (Nick)
- Display game on monitor (Mike)
 - Ball, players background

Goal:

- Paddle angle affects ball direction of motion (Nick)
 - Necessitates getting angle of paddle
- Render paddle at specified angle (Mike)
 - Figure out rotation matrices and how to rotate graphics efficiently
 - Create graphics for paddles
- Sounds (Mike / Nick depending on who's free)

Stretch:

- Ball speed affected by paddle speed (Nick)
 - Get paddle speed using previous x,y coordinates of guiding LEDs
- Attacks can be launched by players (Nick for physics, Mike for graphics)
- Background reacts to game (Mike)
- Paddle selection affects ball interaction (Nick)