LT7 - Prototyping

Slow Pitch Softball Detector Team 2 - Pitch Perfect

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Project Overview

Pitch Perfect is a device/app designed to track softball pitches and determine their legality based on height, ensuring fair play, safety, and aiding player development.

Objectives:

- Improve communication of pitch legality to players and coaches.
- Provide umpires with reliable data for consistent decision-making.
- Enhance overall player experience and development in slow-pitch softball.

Project Overview

Client: Nicholas Fila

- Renown Ames Slow Pitch Softball Player
- Tired of players arguing about illegal pitches

Advisors:

Dr. Fila

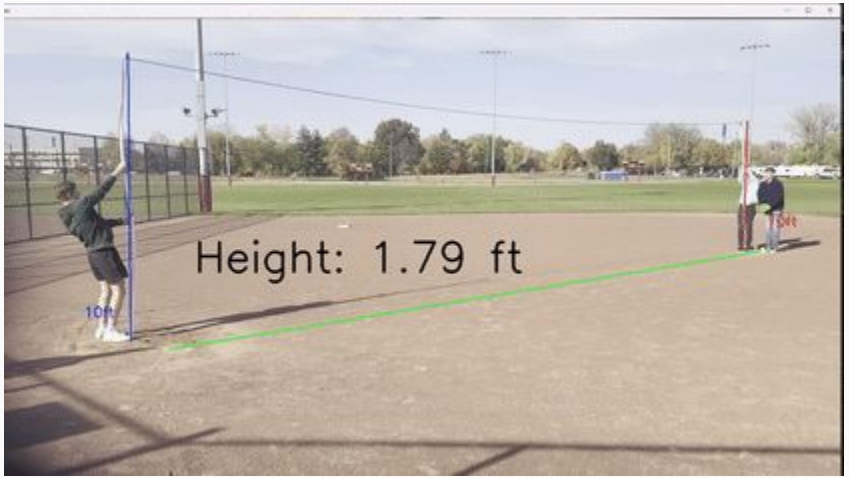
Dr. Jones

Prototype: Object Tracking

- Our first prototype focused on tracking the position of a ball during a pitch
- Our prototype approach uses the color of the ball as a means of what to track
- Our prototype removes noise by only looking at areas of movement in the frame

Prototype: Height Tracking

- We prototyped height tracking with two different methods
- 1st we used the radius of the ball as a means of determining it's height throughout a pitch
- 2nd we used it's angular position at the center of a pitch to determine height
- We will continue to test both approaches



Next Steps

- Fine tune height tracking code to be within 5-8 inches, with our end goal being 3.8 inches.
- Enhance object tracking to perform in both day and night conditions
- Create a frontend application using QT to integrate our object tracking and height tracking programs.

Conclusion

With our project we have been doing frequent testing to determine if our methodology of both ball tracking and height tracking will be within our wanted tolerances. Our current prototypes show promise in our future ability to determine a consistent height for the softball, but further development and testing is needed.