Softball Team 1

EE/CprE/SE 491 WEEKLY REPORT 1

Beginning of Semester – September 19, 2024

Group number: 49

Project title: Slowpitch softball device

Client/Advisor: Nicholas Fila

Team Members/Role:

Cael: Lead Code and Design Review

Andrew: Lead System Designer

Kyle: Lead Testing Engineer

Sam: Communication and Documentation Lead

Kolby: Lead Client Outreach

- **Weekly Summary**

  This past week, we met with our group and had our first two client meetings. We went through initial design concepts both as an assignment and with our advisor to get some initial ideas for how we would implement and test our designs. Moving forward, we will go to some intramural and club slow-pitch games to gather pictures and talk with players about their perspectives. We also have an initial idea of using OpenCV as a library to analyze videos and photos and will start using that.

- **Past week accomplishments**
  - Andrew Kinneer: Did some research on object tracking with cameras
  - Kyle Nachiengane: Research slow-pitch softball rules and regulations.
  - Cael Schreier: Talking with previous slow-pitch softball players on their perspective
  - Kolby Moorman: Researching different things about pitch requirements in slowpitch.
  - Sam Skaar: Played a softball game and talked with umps about call frustrations. Researched current market products for camera mounts.

- **Pending issues**
    - The one big issue was finding a time that we can all meet both as a team and with Advisors.
- **Individual contributions**

NAME	**Individual Contributions** *(Quick list of contributions. This should be short.)*	**Hours this week**	**HOURS cumulative**
Andrew Kinneer	Research object tracking	1	1
Kyle Nachiengane	Looked through the slowpitch handbook.	2	2
Cael Schreier	Communicating with players	2.5	2.5
Kolby Moorman	Researching different pitch requirements	1	1
Sam Skaar	Field testing (pitcher), current product research (nexus mount), researched possible roadblocks for initial design concept.	2.5	2.5

- **Plans for the upcoming week**

- Andrew Kinneer: Further research into object tracking solutions
- Kyle Nachiengane: Try to integrate Open CV into my environment.
- Cael Schreier: Start researching and experimenting with the OpenCV library
- Kolby Moorman: Gather an idea about the OpenCV library and read into how different pitch analysis are created like in the MLB or Little League World Series.
- Sam Skaar: Record the next softball game, and research possible architectures for initial design.

- **Summary of weekly advisor meeting**

In our first meeting, we discussed a broad overview of the project, including the problem we are going to solve (detecting illegal pitches), initial ideas (a phone app, external camera, multiple cameras), and other considerations for moving forward (player and umpire opinions and suggestions. We also discussed potential issues that could arise with calibrating and accurately detecting distance and depth, as well as some libraries to potentially use going forward like OpenCV.