EE/CprE/SE 491 Status Report 3.5

Feb 27, 2025 12:00 AM-Mar 6, 2025

Group number: 49

Project title: Slowpitch softball device

Client/Advisor: Nicholas Fila

Team Members/Role:

Cael Schreier: Bookkeeper and Code Review

Andrew Kinneer: Lead System Designer

Kyle Nachiengane: Lead Testing Engineer

Sam Skaar: Coordination and Documentation Lead

Kolby Moorman: Lead Frontend Developer

- **Weekly Summary**

- **Past week's accomplishments**
  - Andrew Kinneer: Made further optimizations to the native Android camera, and fixed orientation issues. Finished merging my Android OpenCV code with Sam's frontend code. Made more progress with implementing our previous Python ball tracking code into Android.

  - Kyle Nachiengane: This week, I worked on integrating opencv framework into our flutter application and optimized the ball detection parameters to find a ball. Took a lot of debugging to initially integrate the framework in xcode runner. Once i was able to access the libraries I spent more time optimizing the circle detection.

  - Cael Schreier: This week I focused hard on getting height tracking to work. OpenCV's human detection wasn't as good as I originally thought, so I have transitioned to having the user manually draw boxes around humans. They are able to draw the two calibration boxes and set the height before the app transitions to just softball tracking.

  - Kolby Moorman: The theme this week for me was build errors. Spent hours trying to figured out why different build errors were happening. I got opencv framework into our application however I made a fatal mistake and began working without pushing. I then got so deep into build errors I had to restart from scratch. Worked with Kyle to get it back up and running and now working to track softball because right now it's not doing very well.

  - Sam Skaar: I met with the other team to get a feel for where they were at. They had some good insights but aren't really ahead of us by any means. I also made a settings pop-up that we can reference in the future…not to much to do from a UI side right now.

- **Pending issues**
  - Universal ball tracking algorithm
  - Height tracking improvements for edge cases
  - OpenCV full mobile implementation
  - Rotational Camera widget

- **Individual contributions**

NAME	Individual Contributions	Hours this week	HOURS cumulative

Andrew Kinneer	Optimizations to the native Android camera, merging my Android OpenCV code with Sam's frontend code, and implementing more ball tracking code	8	86
Kyle Nachiengane	Intergrated open cv and tried fine tuning ball detection	16	85
Cael Schreier	Got height tracking functioning on the android side of the application	10	83
Kolby Moorman	Worked with build errors and developing softball tracking.	11	80
Sam Skaar	Met with other team. Made settings widgets	8	85

- **Plans for the upcoming week**
  - Andrew Kinneer: Fully implement our softball tracking code into native Android.
  - Kyle Nachiengane: Try implementing our ball tracking code we had last semester.
  - Cael Schreier: Continue to test, debug, and improve height tracking. Work with Drew on softball tracking help if needed
  - Kolby Moorman: Continue to dial in our softball tracking once we get it pretty good, I will pivot to working on what cael is in terms of height tracking.
  - Sam Skaar: Make settings actually work with caels calibration code. Merge systems.

- **Summary of weekly advisor meeting**