Softball Team 2

PITCH PERFECT

EE/CprE/SE 491 Status Report 5

Mar 13, 2025 12:00 AM-Apr 3, 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

- o **Weekly Summary**

We're getting close, but there is still work to be done. We just need to get over the final hump of consistently finding and tracking a softball. Our python code form last semester isn't as consistent on Android devices, so we are implementing fixes to make it more consistent. Once that is done, we will be able to fully field test our calibration, tracking, and illegal pitch detection.

- **Past week's accomplishments**
  - Andrew Kinneer: Worked on an 'advanced' user color calibration mode so users can input the min and max hsv values to define the softball color mask. The black and white mask will be displayed on the screen so the values can be tuned in real-time. Will be very useful for debugging on the development end, and if simple color calibration fails, this gives another alternative, although it is less intuitive to use than the simple calibration.

  - Kyle Nachiengane: Worked on getting settings for min and max height saved

  - Cael Schreier: I fixed a UI bug that came from my replay feature, then worked to streamline the UI for the calibration process. There are now popups for each step to guide users along, and the process now supports both "one person" and "two person" calibration methods. The two-person is exactly how we have been calibrating, and the one-person allows a picture to be taken so one person can calibrate their height. Buttons were also added for navigation between the Android screens and Flutter.

  - Kolby Moorman: This past week I transitioned from ios to android in order to speed up production and hopefully get a fully functioning app to be tested. I got myself familiar with everything currently being done on the java side and began experimenting to see if I could come up with anything. Also added some small logic for illegal pitch count.

  - Sam Skaar: Worked on data persistence for user pitch stats and updated the UI, specifically the about tab.

- **Pending issues**
  - Universal ball tracking algorithm
  - Height tracking improvements for edge cases
  - OpenCV full mobile implementation
  - Sending game data from Android to Flutter

- **Individual contributions**

NAME	Individual Contributions	Hours this week	HOURS cumulative
Andrew Kinneer	Manual Color Calibration Mode	6	112
Kyle Nachiengane	Min and max height in settings	5.5	101
Cael Schreier	Replay fixes, Calibration UI improvements, navigation buttons added on Android	9	106
Kolby Moorman	Added some simple logic for illegal pitch count and got android device set up	6	108
Sam Skaar	User persistent stats, UI and about info upgrades	6	102

o **Plans for the upcoming week**
  ● Andrew Kinneer: Finish advanced color calibration and make a big push to polish and finish softball tracking

  ● Kyle Nachiengane: Continue on getting heights to save and test current app.

  ● Cael Schreier: I will help out the team with any pending issues that we still have with ball tracking, data storage, UI upgrades, and testing.

  ● Kolby Moorman: Next week I plan to be a "floater" and work on any touches that need to be figured out whether that is fixes found in code, testing plans. Basically wherever help is needed I will be available for.

  ● Sam Skaar: Based on team discussion at our meeting tomorrow.

o **Summary of weekly advisor meeting**
After much discussion of adding a replay feature and including screen flow diagrams from a previous meeting, we decided to add those features and fully draw out most of our game screens. This was very helpful for our advisors and us to visualize our app fully, and to include a feature to help users' confidence in our product. We also finally decided to ditch iPhone development due to all of the complications that came from it and focus solely on Android development.