

Softball Team 2



EE/CprE/SE 491 Status Report 4

Feb 27, 2025 12:00 AM-Mar 13, 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

The past weeks have had great strides to have a testable app. On the Android side we have our calibration working and our ball tracking is moving along nicely. On the Apple side, we have encountered many struggles with implementing our libraries, but are working on fixes and workarounds for them. We have also continued to improve our UI and created a full set of screen mockups to implement.

○ **Past week's accomplishments**

- Andrew Kinneer: Fully transitioned our old python ball tracking code into our Android OpenCV activity. Created a step in the Calibration Activity to calibrate the color of the softball to be tracked.
- Kyle Nachiengane: This week, I continued to work on my swift ball tracking code and experimented with using wrapper classes for objective-c in a new project. Ran into many issues with objective c, and swift ball tracking is still inaccurate and ran into issues with libraries not being found with last semester's ball tracking.
- Cael Schreier: After getting our height tracking calibration working, I got our sound functionality working on the android side, and wrote a simple class to detect illegal pitches given a ball height. This will help clean up our code as we continue our pitch detection logic. Additionally, I started improving the calibration screen's UI, which will be an ongoing process.
- Kolby Moorman: The theme this week for me was build errors. Spent hours trying to figured out why different build errors were happening. I then looked at Kyle's softball detection and have started working with objective c to pivot to using their opencv library since swift doesn't contain all of the opencv modules needed to track the softball.
- Sam Skaar: Made the Mockups

○ **Pending issues**

- Universal ball tracking algorithm
- Height tracking improvements for edge cases
- OpenCV full mobile implementation
- UI Upgrades

○ **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Andrew Kinneer	Fully transitioned old python ball tracking code into Android. Added color calibration for the softball to be tracked	10	96
Kyle Nachiengane	Wokred on objective-c route in a new project. Tried optimizing the swift code to use the ball tracking code from last semester.	7.5	92.5
Cael Schreier	Got height tracking functioning on the android side of the application	8	91
Kolby Moorman	Worked with build errors and developing softball tracking.	10	90
Sam Skaar	Made the mockups	5	91

○ **Plans for the upcoming week**

- Andrew Kinneer: Work out minor difficulties with tracking after the transition from Python to Java. Better detect when a pitch has started and stopped so the application can run continuously through a game.
- Kyle Nachiengane: Continue implementing our ball tracking code we had last semester. And get a basic objective c environment set up to test.
- Cael Schreier: Improve the calibration screen UI based on our mockups and continue to test the application with the team.
- Kolby Moorman: Continue to dial in our softball tracking/ pivot to using the objective c opencv.

- Sam Skaar: Implement the mockups into the systems front end.

- **Summary of weekly advisor meeting**

There have been many pushes from our advisors to meet up with the other softball team, which we were finally able to do and discuss our projects together. We also received some good feedback on how to improve our design process by creating screen mockups of what we want our final UI to look like.