

# Softball Team 2



## EE/CprE/SE 491 Status Report 2

Feb 13, 2025 12:00 AM-Feb 20, 2025

Group number: 49

Project title: Slowpitch softball device

Client/Advisor: Nicholas Fila

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### 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

In order for our application to reach the performance we require, we are writing all of our processing logic directly in Java for Android and Swift for IOS. This will lead to a better product when all is said and done, but this week it has led to many headaches trying to get all of the necessary libraries and dependencies working in those environments. This week has been mostly debugging and fixing errors that have come from that.

- **Past week's accomplishments**

- Andrew Kinneer: After some research we made the switch to write our OpenCV video processing code in native Android and Java instead of Flutter. Looking at more in-depth examples online, it seems like this is the way to go for improved functionality and speed of development. The OpenCV library still works great in Java and should only introduce slight runtime overhead. I Configured our Android project to use Java instead of Kotlin, which was configured as the default by Flutter. All of us are a lot more comfortable with Java than Kotlin so it makes sense to switch. I set up a method channel and successfully communicated between Flutter and Android with it. I was able to import OpenCV Java to our Android project successfully.
- Kyle Nachiengane: Researched integrating OpenCV with swift the native code for ios.
- Cael Schreier: Working with Drew to get our OpenCV functions working through Java as a channel to our application, and debugging all that comes with importing all necessary libraries.
- Kolby Moorman: Gathered more in depth knowledge of OpenCV on IOS in order to tell if it's worth it. I gathered that there is an Opencv package that is able to be run on IOS. It will require us to run swift in order to actually use the package.
- Sam Skaar: I am working on front end app design, learning how the design of flutter apps works.

- **Pending issues**

- Is it worth trying to develop it for IOS in terms of learning swift
- Universal ball tracking algorithm
- Height tracking improvements for edge cases
- OpenCV full mobile implementation
- Rotational Camera widget

- **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Andrew Kinneer	<ul style="list-style-type: none"> <li>● Research on using native code for OpenCV instead of just Flutter</li> <li>● Convert Android project to Java instead of Kotlin</li> <li>● Created a successful method channel</li> <li>● Import OpenCV Java into the Android project</li> </ul>	8	68
Kyle Nachiengane	Researched integrating OpenCV with swift the native code for ios.	5	56
Cael Schreier	Working on Java OpenCV and YOLO functions, debugging import issues.	6	64
Kolby Moorman	Looked into navigating the OpenCV with swift and tried to become a little familiar with swift	6	57
Sam Skaar	Started add widgets and pages into the app. Those changes are not ready to be merged yet.	5	62

○ **Plans for the upcoming week**

- Andrew Kinneer: Still running into problems with sending camera video from Flutter to Android and then back to Flutter. Possibly will have to switch the camera library we are using in Flutter. After all the camera video is sorted, transferring our Python OpenCV code to Java should be fairly easy.
- Kyle Nachiengane: Start implementing native code for IOS in our project.
- Cael Schreier: Continue importing functions to our app and debugging those imported functions. Specifically on the android side.

- Kolby Moorman: After this weeks meeting, I want to get opinions on trying to learn and navigate Swift with opencv and dart vs just pivoting and solely focus on teaming up with Cael and Andrew to get the Opencv in java working and get that on an android app and then worry about IOS if we have time. If that's not the route to take then I will begin trying to start on the IOS development portion.
- Sam Skaar: Continue building out the front end. Add in any functionality the others come up with.

- **Summary of weekly advisor meeting**