

Techno Caddie

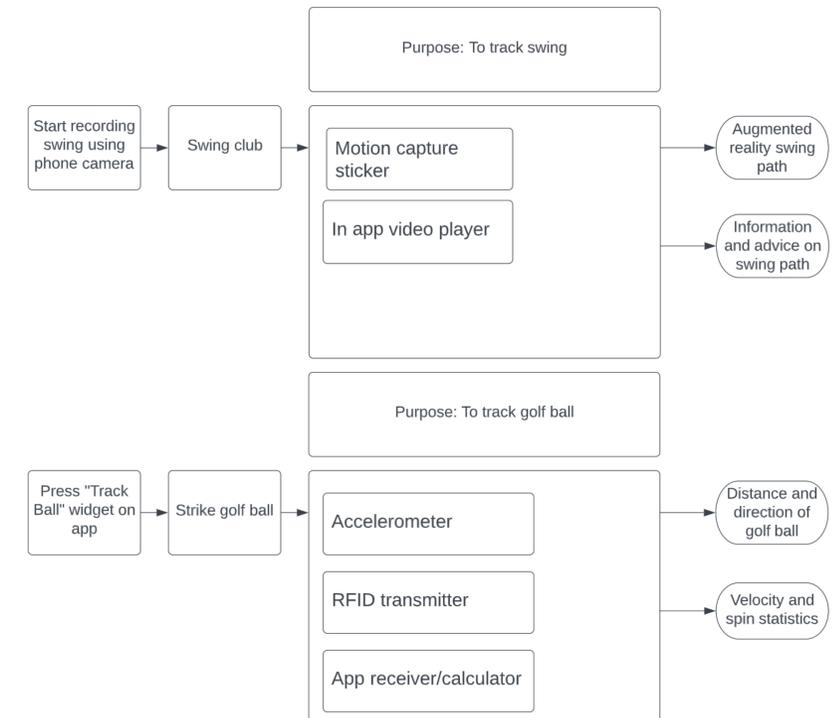
Project

Purpose: Golf can be one of the most difficult sports to play. We wanted to solve some of the problems that come with golf. The main functions of the Techno Caddie are:

- Track swing
- Analyze swing
- Track golf ball statistics



Systems



Methods

- The golf ball is 3-D printed to match the size of a normal ball. It is filled with rubber to protect the MCU.
- The golf ball is equipped with a Seeed Studio XIAO nRF52840 Sense.
- The MCU reads the data from its accelerometer and gyro and then transmits that data via Bluetooth to a phone.
- The phone app reads data and calculates initial angle, initial velocity, distance between sample start and end, max height, carry distance, total distance, landing angle, and time in air.
- The swing tracker can outline the swing of a club head with red, blue, and yellow coloring. User can take video and compare their swing with other swings and gain tips.

Conclusion

The Techno Caddie is able to:

- Track golf ball statistics
- Track swing
- Analyze swing

Potential Improvements:

- The golf ball tracking could be improved to account for obstacles on the course.

Lessons Learned:

- Sometimes the simpler solution is the better one when working with an MCU.
- Interfacing with app development requires consideration in disposing and different states.
- Team communication can be difficult yet important.