



Nicholas Dionisio



Mason Lipp



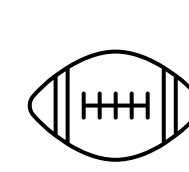
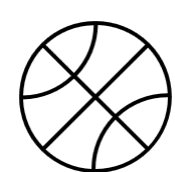
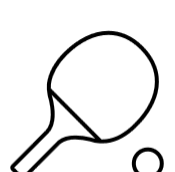
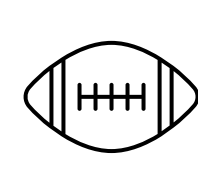
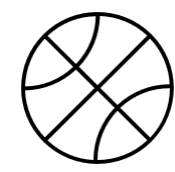
Toller Phipps



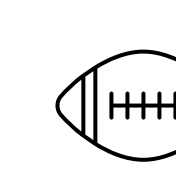
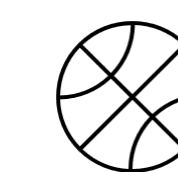
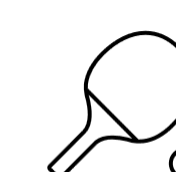
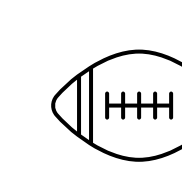
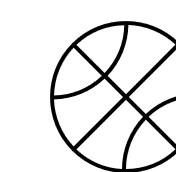
Diego Quintero



John Lewis



Team 10: MinuteZero

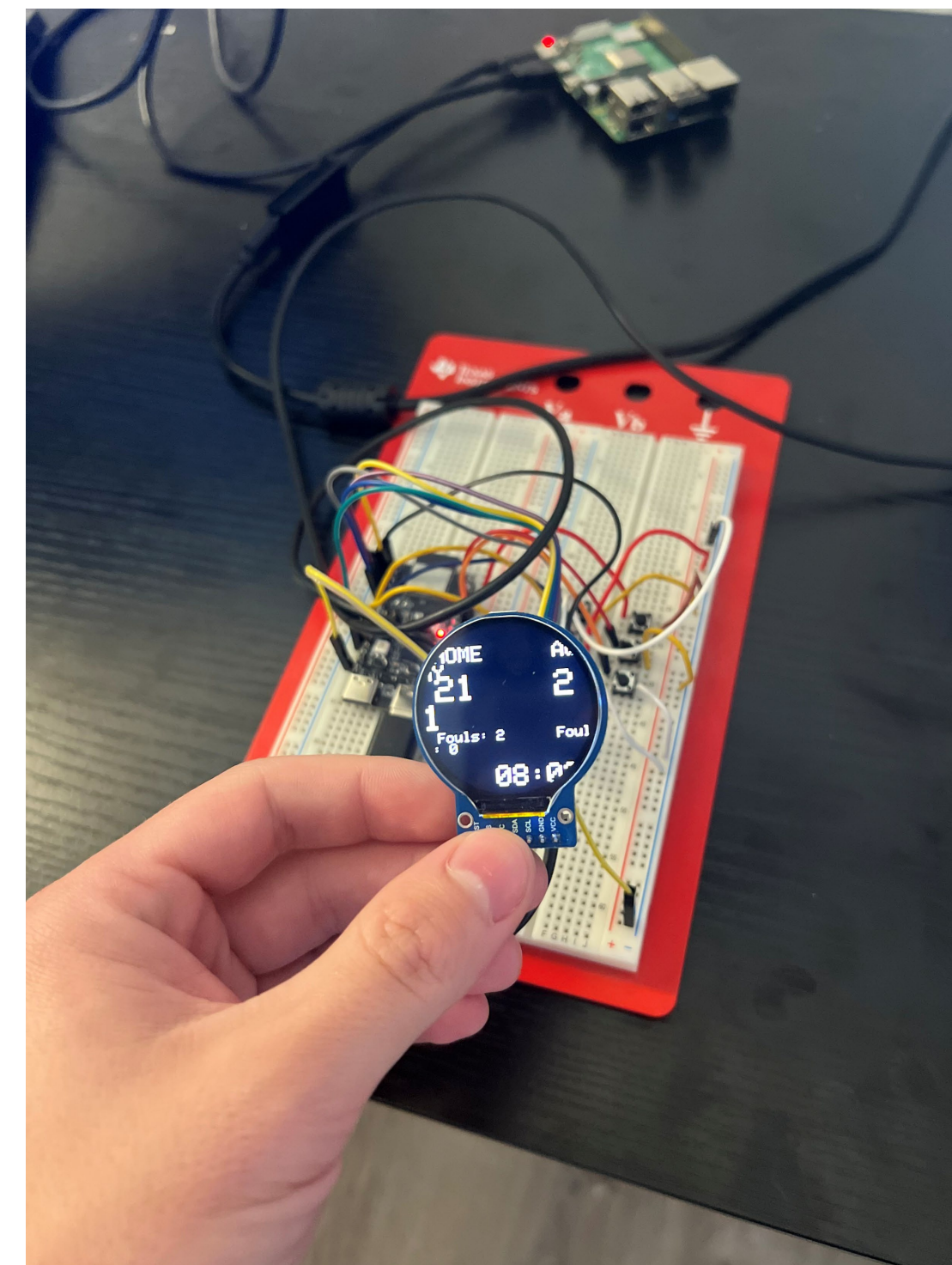


Introduction:

The MinuteZero ScoreWatch aims to make officiating and scoring sporting events more cost-effective, precise and accessible.

Theory:

- ⊗ Develop a wearable device that enables referees to control the game from their wrist
- ⊗ Design custom watch hardware and control logic from the ground up
- ⊗ Implement BLE communication between the watch and a Raspberry Pi receiver
- ⊗ Synchronize game data to a real-time database and live website



First ESP32 Prototype



Current Waveshare Prototype

Results:

- ⊗ Developed complete watch control logic
- ⊗ Established end-to-end communication
Watch → BLE → Raspberry Pi → Database → Website
- ⊗ Designed, fabricated, and validated custom PCBs
- ⊗ Built and tested multiple functional prototypes
- ⊗ Delivered a fully operational watch with a 3D-printed enclosure

Conclusion:

MinuteZero successfully created a viable wearable system for use in lower-level sporting competitions. Fully integrated with core logic and underlying technology functioning as intended. To advance toward a fully market-ready product, future development will focus on reducing device size through higher-end components and refined hardware integration.



Custom PCB Inside Case



Assembled ScoreWatch