

Week 07

Keel Bone Chicken Project

10/10/25

This Week

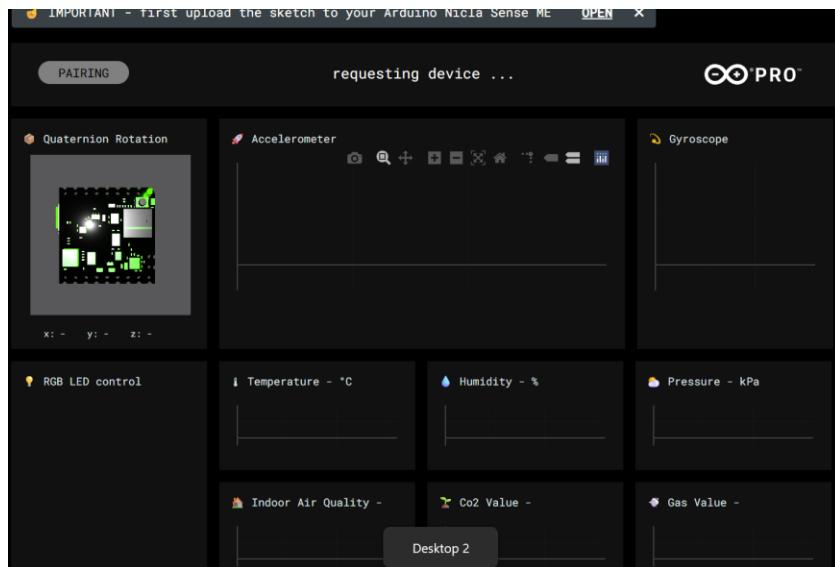
Progress & Issues faced this week

- Locally hosting BLE Data Logger
- KiCad Schematic Changes
- KiCad Layout Changes
- Routing Issues on PCB

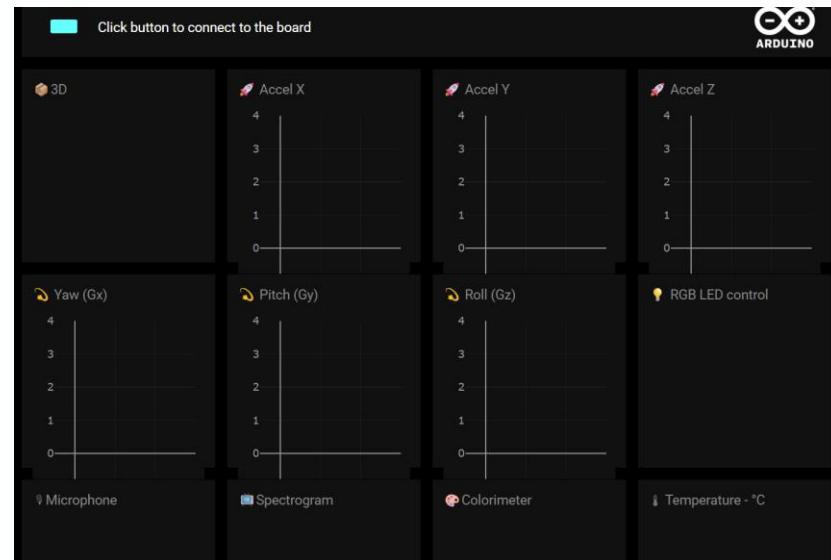
Locally hosting BLE Data Logger

Able to move from Arduino API to personal device

- <http://localhost:8000/BLESense-test-dashboard/>
- Used index.html and GTLFLoader.js to modify charts



Arduino BLE Dashboard

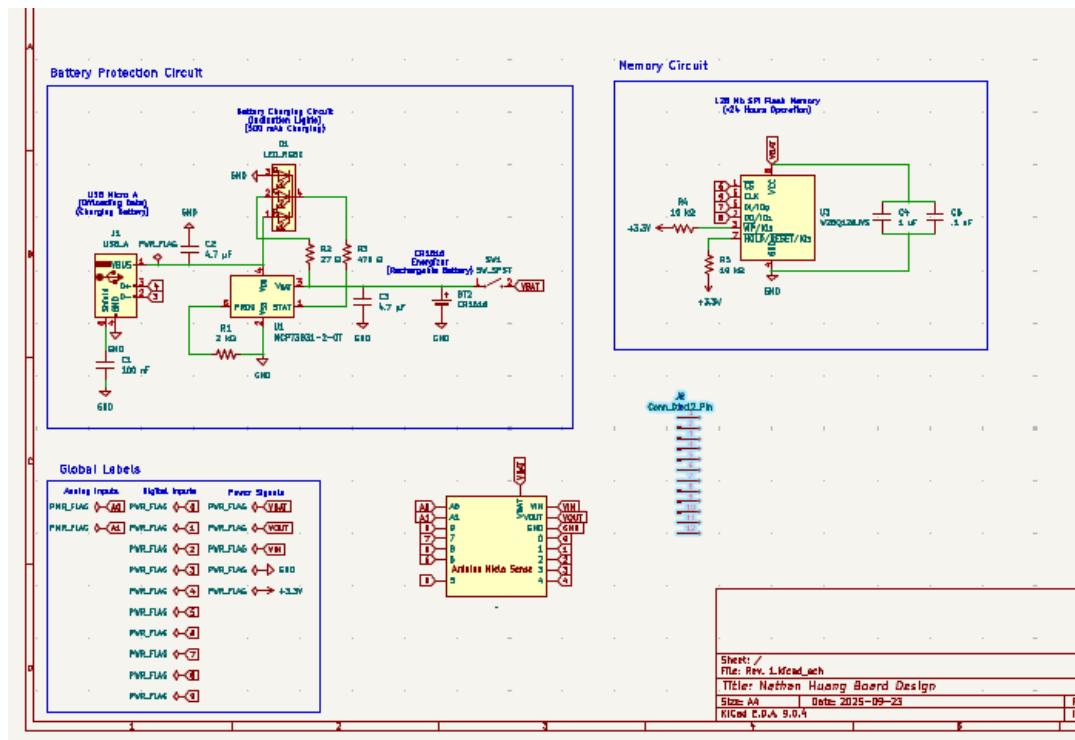


Locally Hosted

KiCad Schematic Changes

New Circuit Components

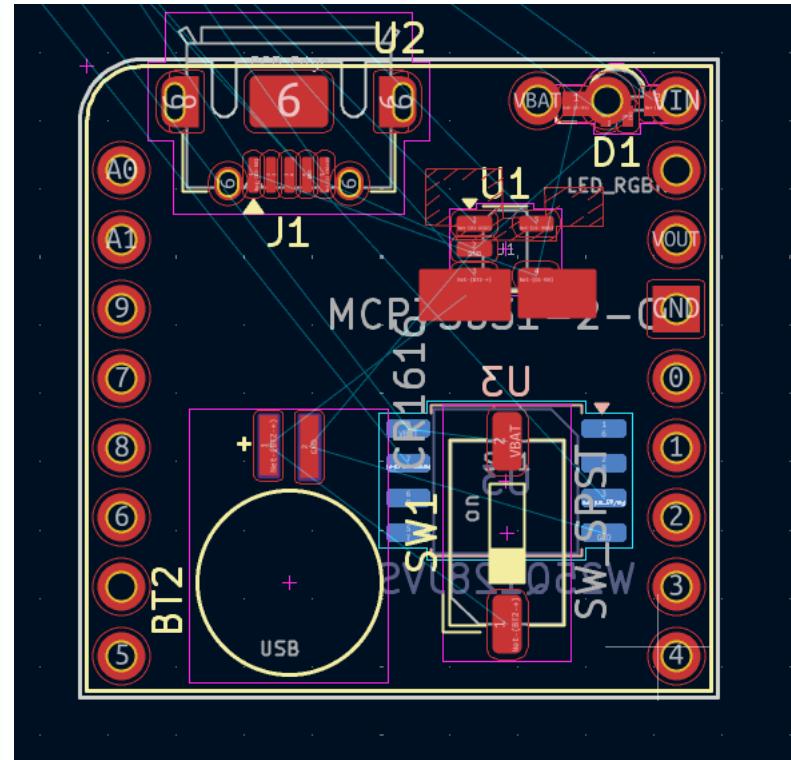
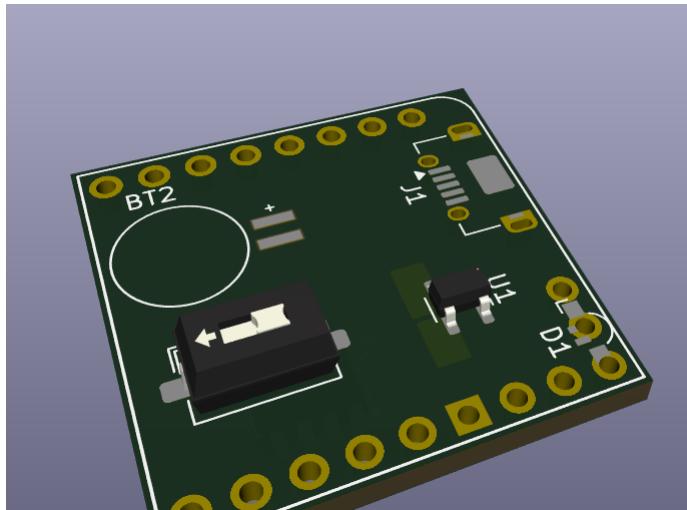
- Battery Charging Circuit (LIR1616)
 - Ribbon Cable
 - Rechargeable Battery Holder
 - Protection Circuit



KiCad Layout Changes

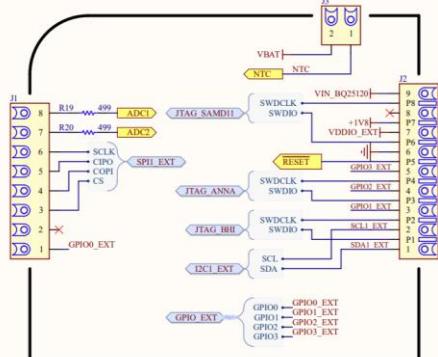
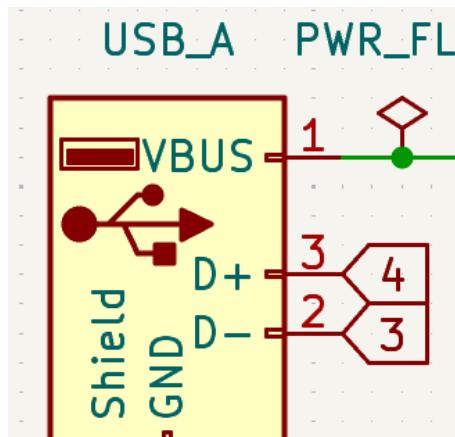
Components added to layout, finalizing layout

- USB Micro Connector
- Battery Charging Circuit IC (MCP73831)
- LIR1616 Holder
- Potential Switch for Charging/Discharging?



Routing Issues on PCB

Footprint not readily available online, cannot route PCB



- <https://forum.arduino.cc/t/nicla-sense-me-and-nicla-vision-footprints/1013892/2>
- <https://github.com/Alarm-Siren/arduino-kicad-library>
- https://github.com/Alarm-Siren/arduino-kicad-library/blob/master/footprints/arduino.pretty/Arduino_Nicla_Vision_Socket.kicad_mod?

Next Week

Blockers & brief summary of next week's work

- Fix routing issue in order to get a fully working schematic (passes design and electrical rules check)
- Order PCB (Lead time ~3 days?)
- Test and verify PCB
- Show Localhost BLE interface with Agriculture researchers → Show them how to use it

Thank You

Purdue Polytechnic Institute