Progress Report - Week 3 | Jan. 24 - Feb. 1, 2025

Group 6:
Cody Reid
Cuauhtemoc Gomez Angeles
Daniel Anishchenko
Tyler Tran
Fernando Custodio Calderon

Notes:

- Buy Power Supply
- Get batteries from Ed
- Test functionality rp2350
- Validate hardware
- See if our battery data is in line with real world usage
- I2C slave config
- For architecture, choose gpio sensor package, battery management chip, or IO breakout/expansion board - will need to decide on this by the end of this week 2/1 - Update: We will do a component by component solution for this
- Rtas integration - decide after we choose architecture *Andrew suggests NOT to use it due to the added complexity
- straight C or circuitPython is recommended by Andrew
- Schedule a meeting to go over proposal on Friday 2pm Online
- Next week - Faculty Advisor meeting moved to Friday @3pm
- For development keep using ARDUINO To just get things to work and then eventually ditch Arduino and then go straight C. If we start with straight C, try to find libraries then for I 2C communication and all that kind of stuff.
- Faculty advisor needs to give input
  So now is the time to share that with ED and with Andrew and they'll give comments and proposals and by the third we need both of their signatures saying that this is good to go
- 3 high-level architectures, The first one we just used the RP 2350 we might use a couple of its analog pins But for the most part we'd be using a management IC that we would then kind of tune to make it happy with sodium ion
- Second option
  was we use some sort of IO expansion board because of the RP 2350 doesn't have a lot of analog pins And we'll basically kind of design our own BMS and software using that
- 3rd would be Maybe using some sort of IO expansion board Yeah, like a IO expansion board or something another sensor package or we could try and do it all Through the pins and sensors
- SUGGESTION from Andrew , use I2C and ADC, ADC that can handle the voltage of a 4 s-pack so up to 12 volts,
  And so that way you don't have you don't have to worry about the crappy Picos analog and also shifting the analog voltage and or having dividers or anything that's like that

might be able to get small I 2C package that can handle the voltage and then just you can just wire it straight into All 4 channels,(4 channels , cell 1,2,3,4)

- Andrew got scheduled to go to California Wednesday to Thursday he will try and call in but might not be able to make it wednesday of next week
- So we should schedule a different time
- Andrew wants us to to get 3S using a 12V battery for LI ION cuz alot of things will use that (3 should be a HIGH SHOULD)
- Ed wants the IP
  He's thinking about selling it
  We Might want to negotiate with him while andrew is there, and should be in the project proposal
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- chat with Ed about setting up maybe like an accounting System or something for all the EPL stuff that we're gonna be grabbing
- Use Google spreadsheet for tracking the EPL stuff we take
- Power Supply Adapter
- Next week **2:30pm Tuesday** zoom meeting
- Next week **3pm Monday** in person
- Adafruit ADS7830 8-channel w/ I2C - Add to buy list
- Instead of utilizing a BMS, we will make our own using a component by component solution

Tasks at hand:

- Project Proposal - will finish rough draft on Saturday, 1/25 and reviewed by our faculty advisor + sponsor to be submitted on Monday 2/3 for the final draft - UPDATE no feedback from Advisor & Sponsor as of Feb. 1st.
- Research research research Part 2- need to research more on the RP2350, This task will be for the whole team