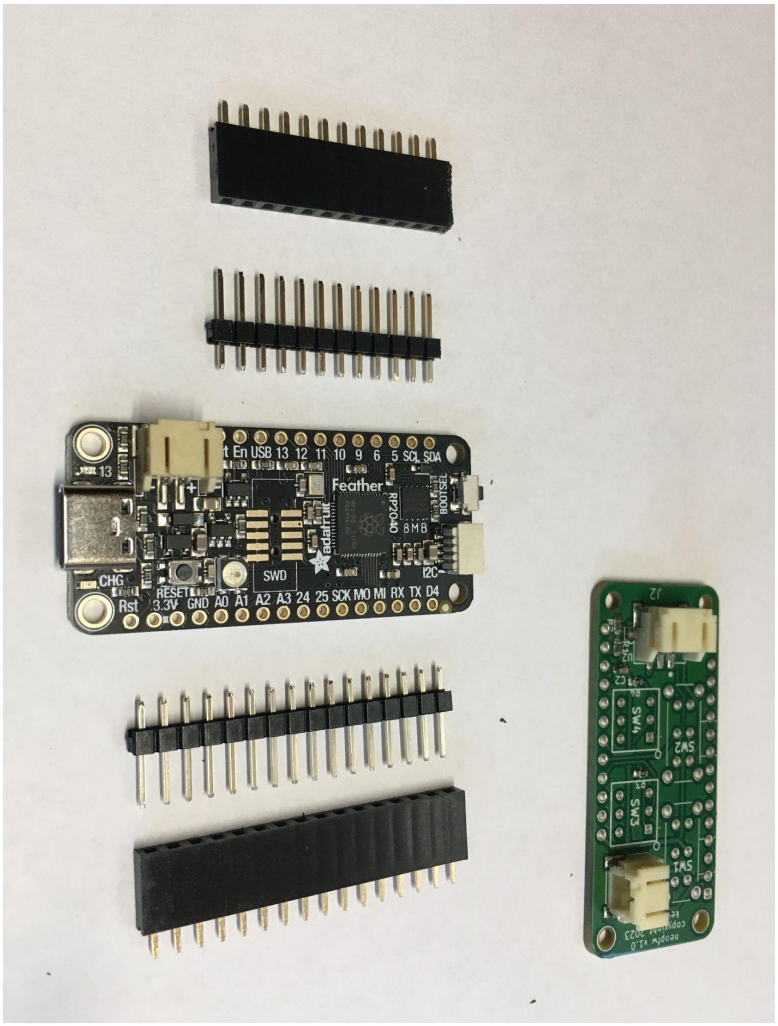
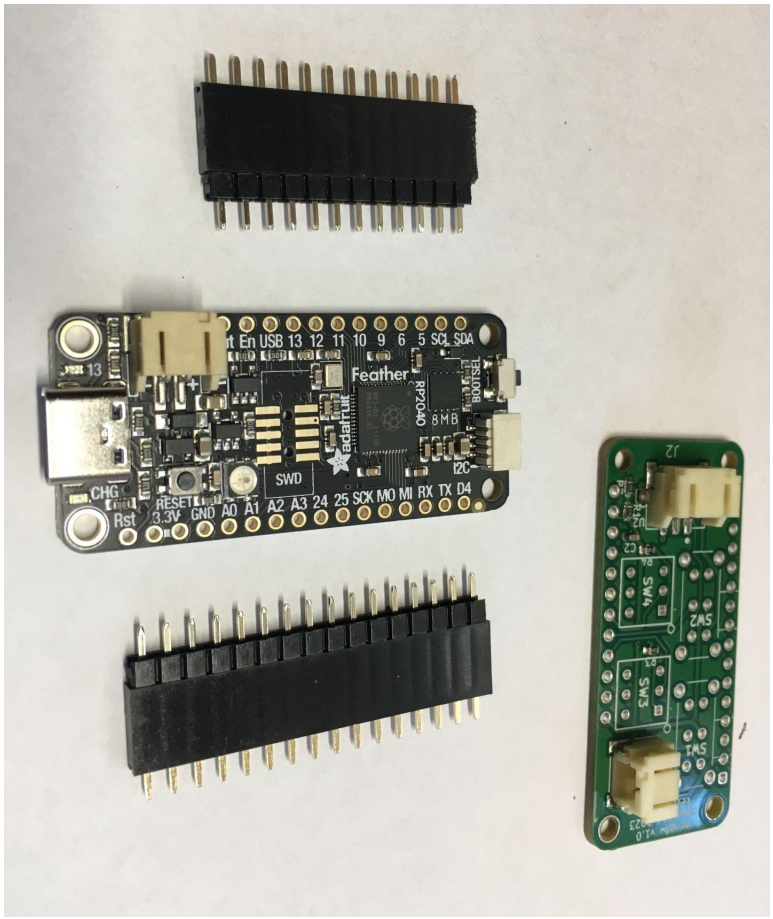
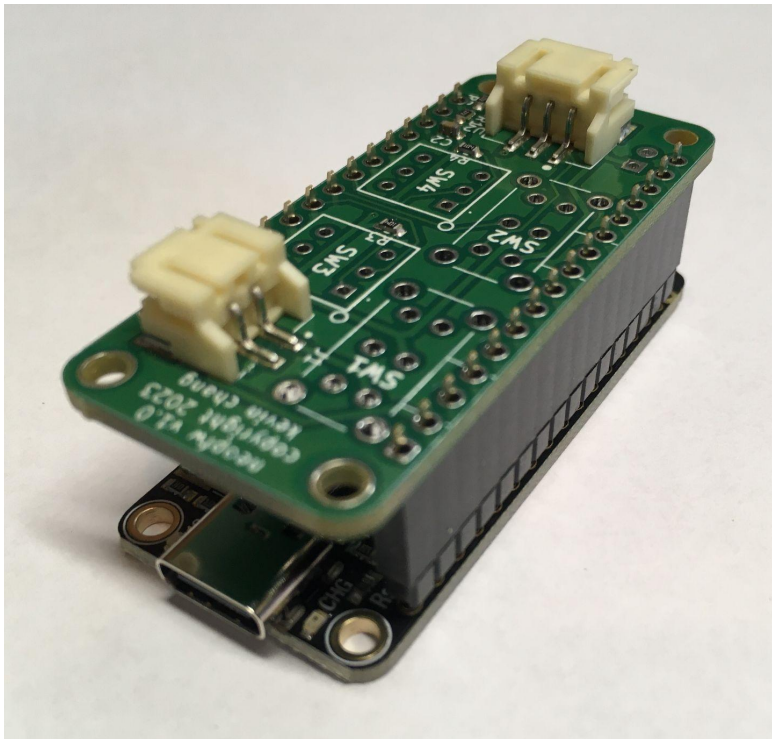
Gather the pin headers, the Feather, and the featherwing. One set of pin headers should be 16 pins long and the other 12.



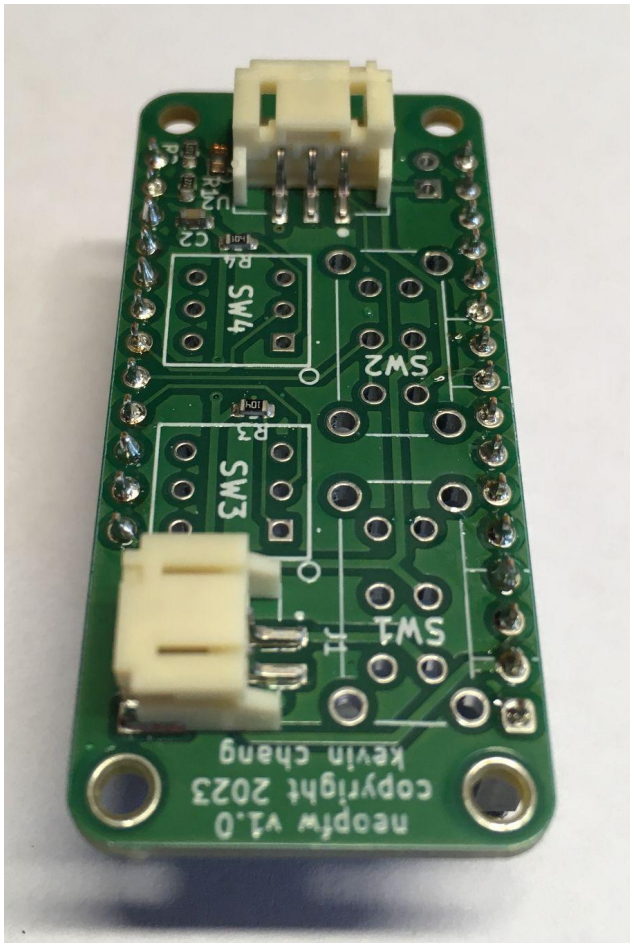
Press the pin headers together.



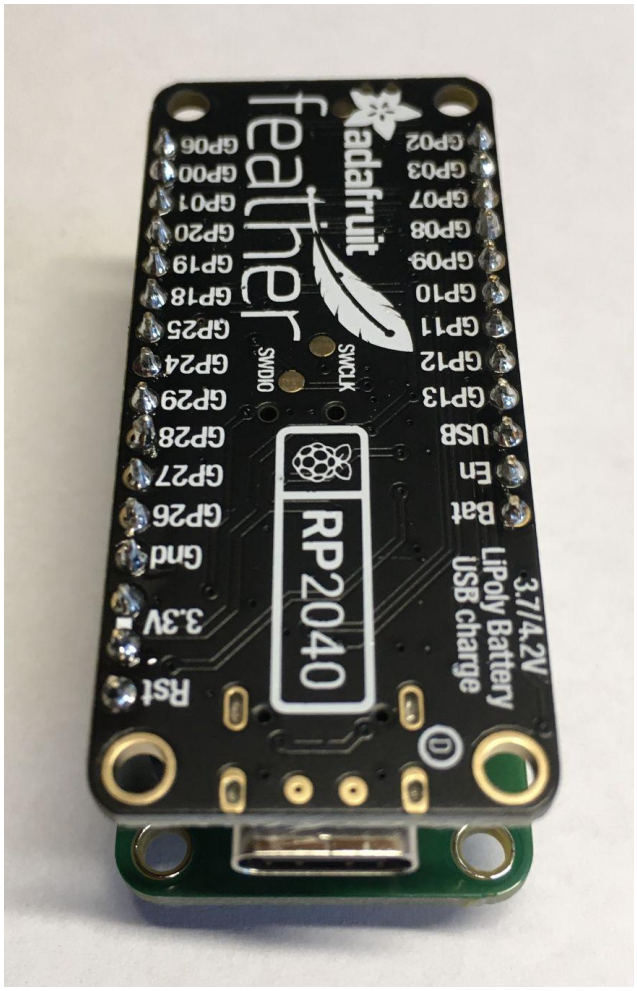
Stack the two boards and pin headers like so.



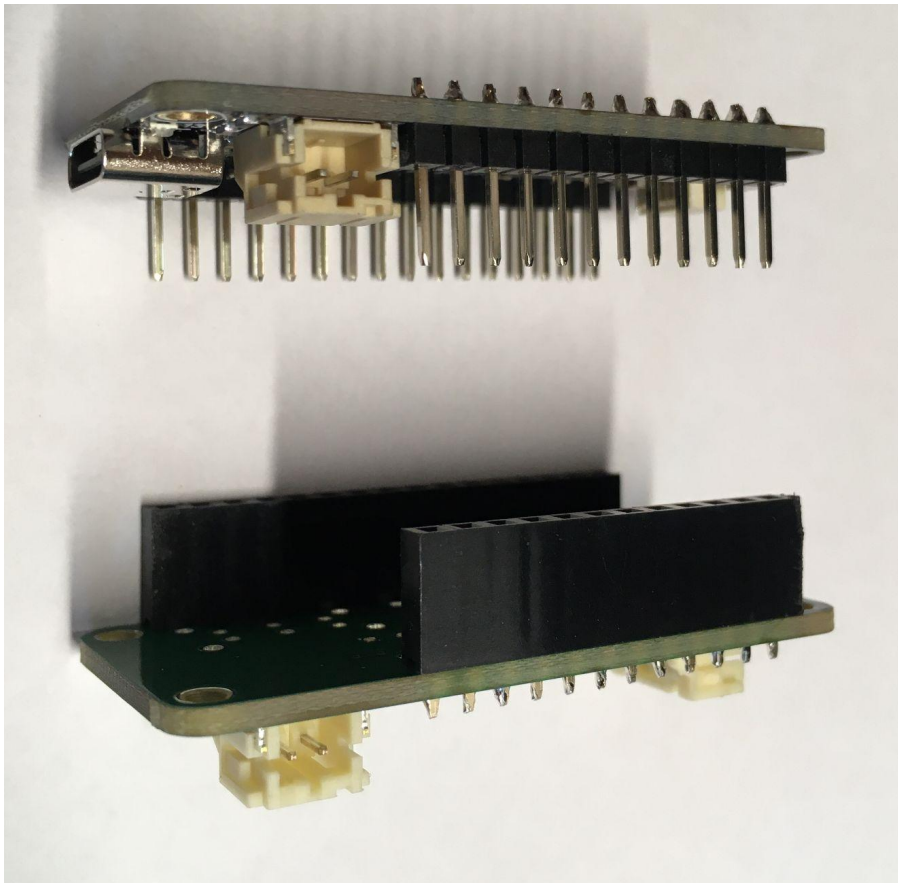
Solder the pins to the featherwing. Take care to align the pin headers perpendicular to the boards.



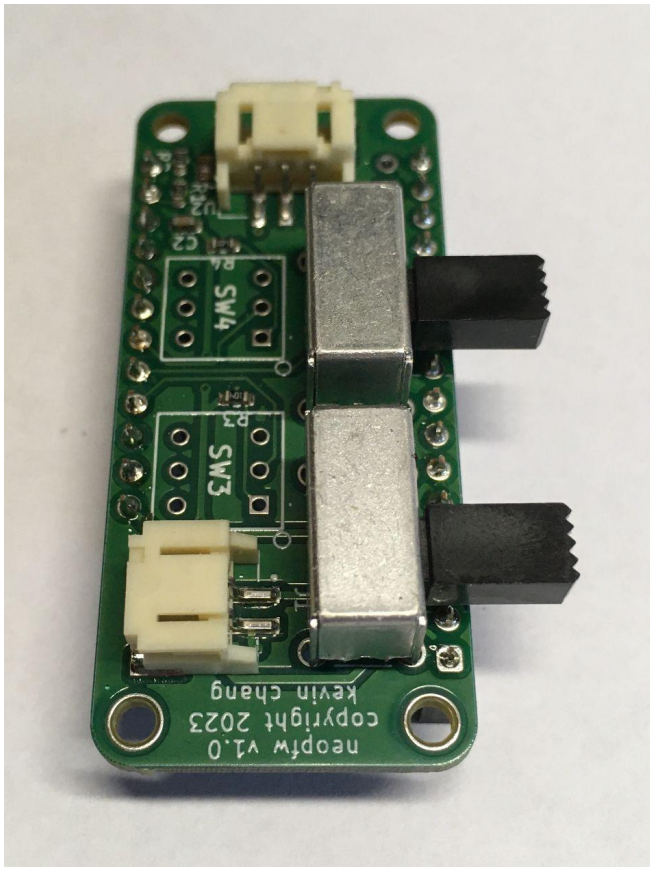
Flip over, and solder the pins to the Feather.

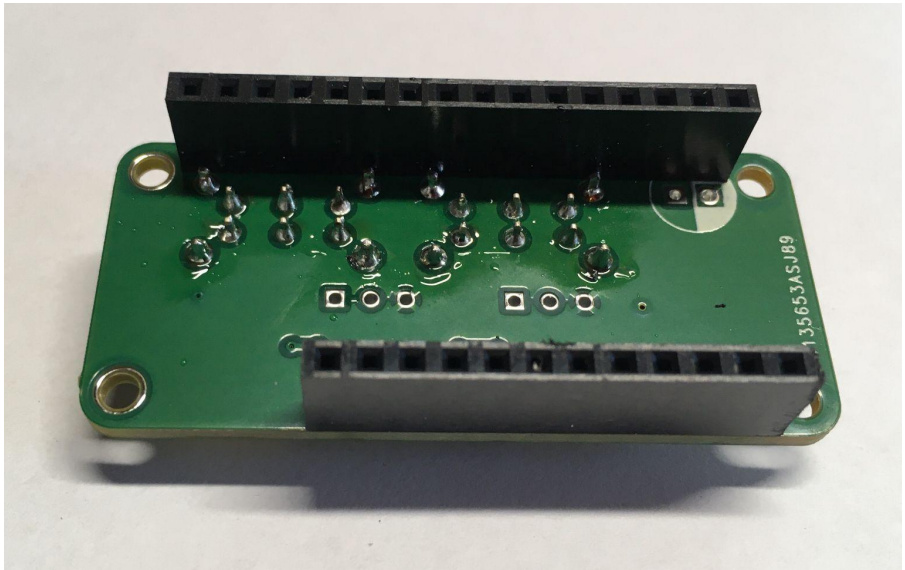


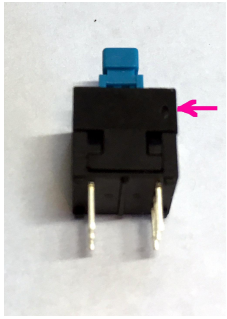
Carefully pull apart the two boards with the pin headers attached.



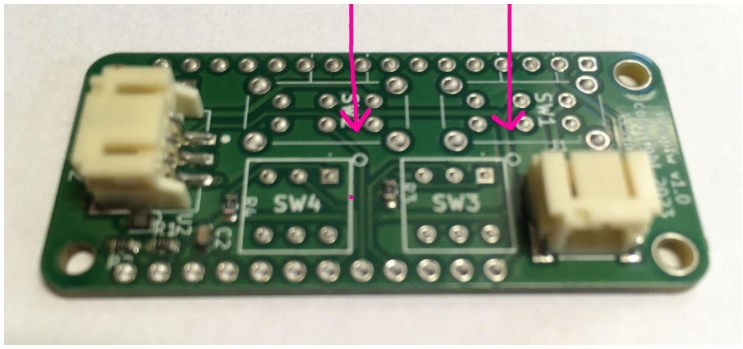
Place the two DPDT switches in the holes. Flip it all over, and solder them in place.



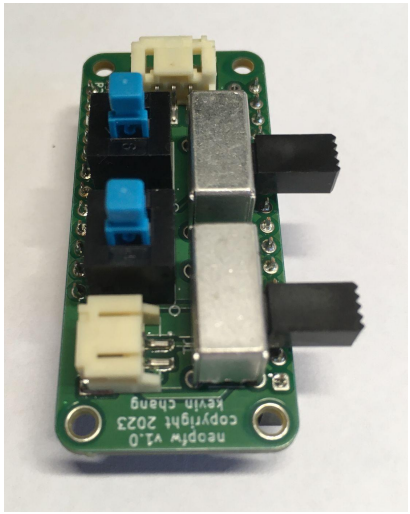



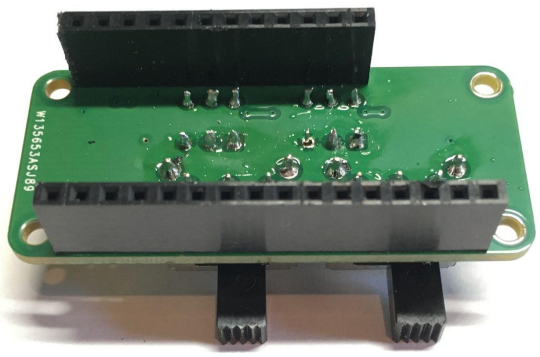


It is hard to see in this photo, but there is a small indented mark that indicates pin 1. Line that up with pin 1 marked with the small circles on the PCB.

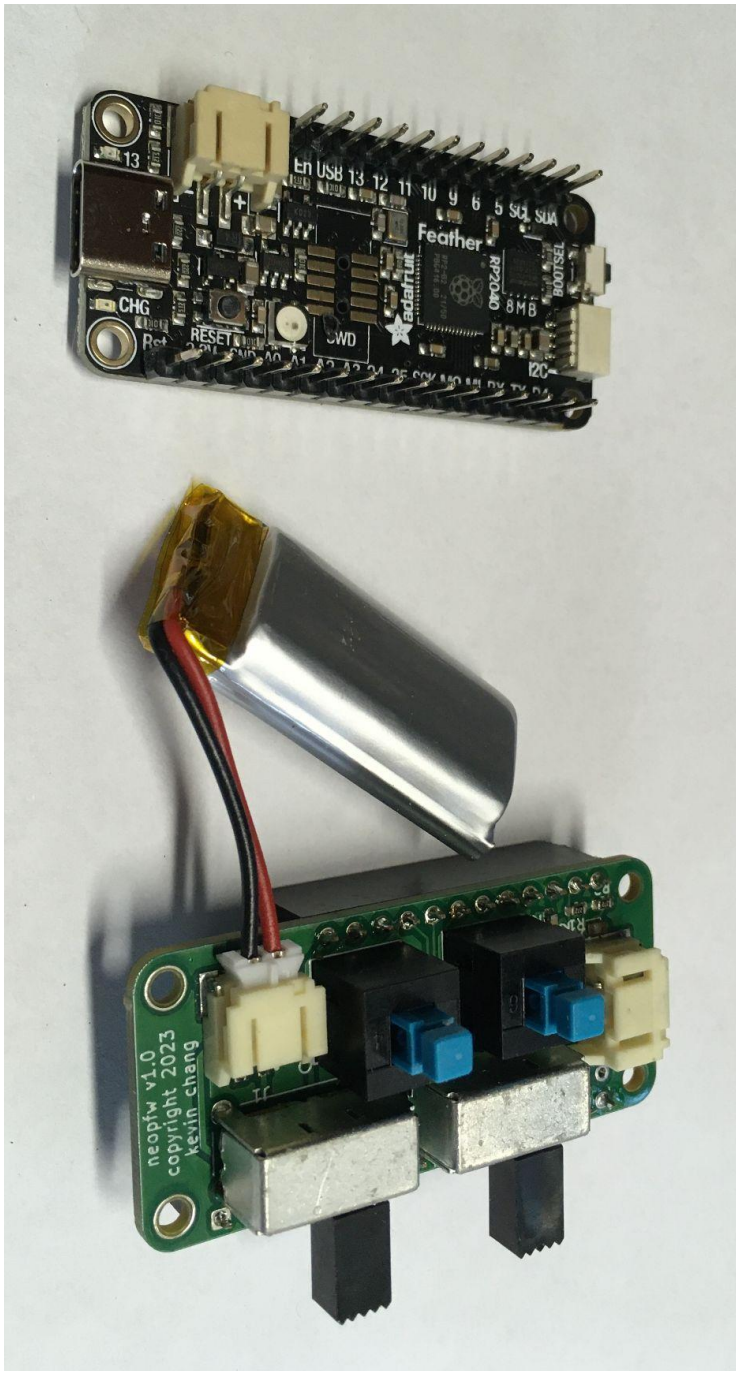



Place the two buttons, flip it all over, and solder them in place. To fit the battery, It might be necessary to trim the leads in the middle of the board. Trimming ~1mm is probably enough.

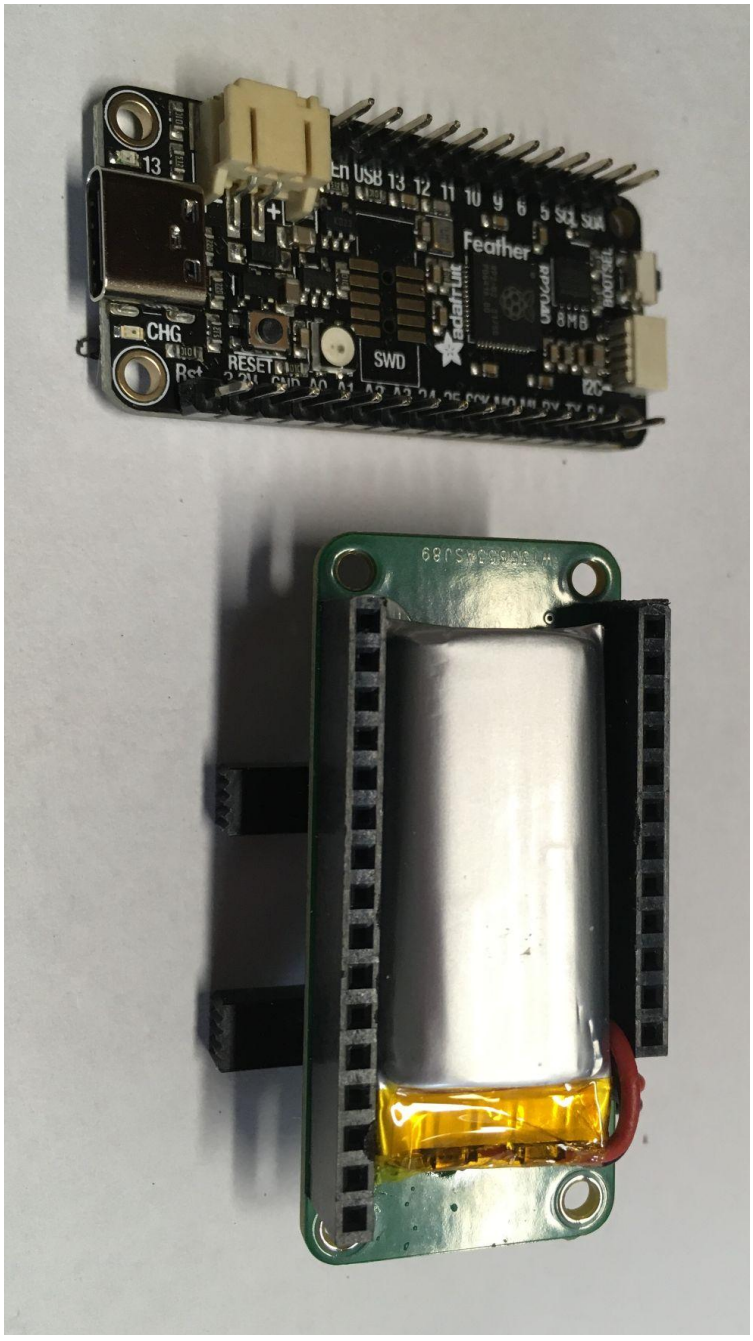


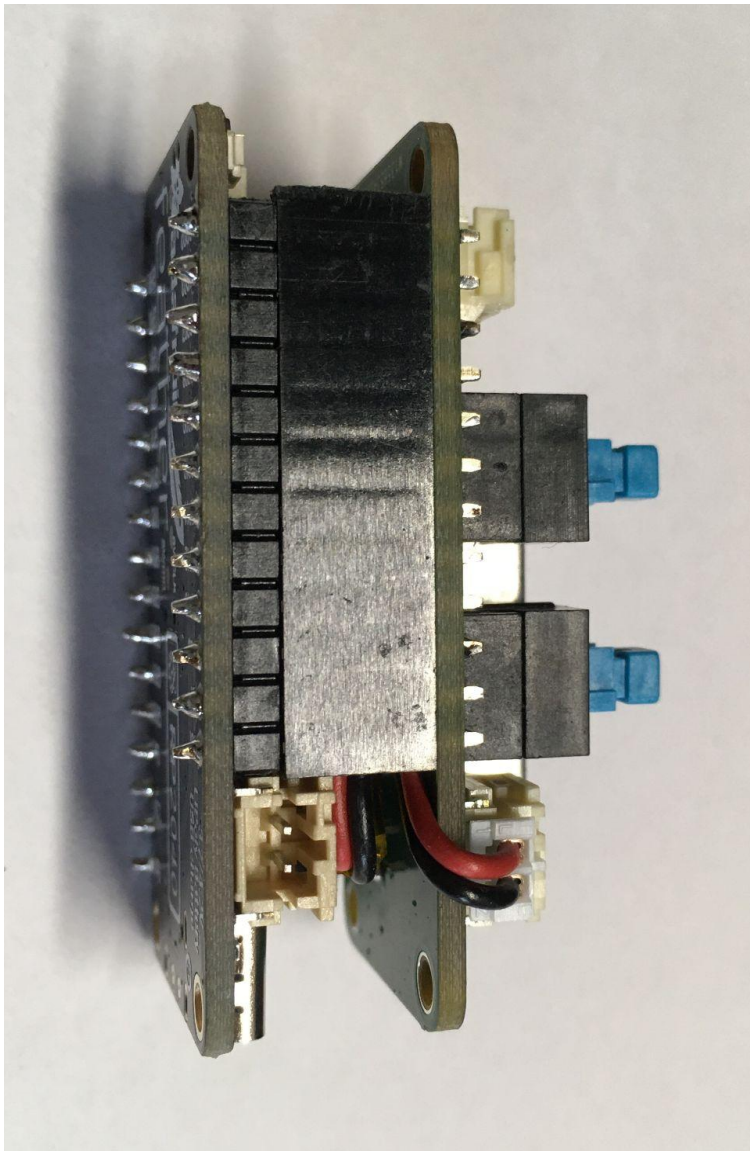
Attach the lipo battery with the 2-pin JST like so. Mind the polarity--black is negative, and red is positive in the photo. (If you have an Adafruit lipo battery, the polarity should match.)



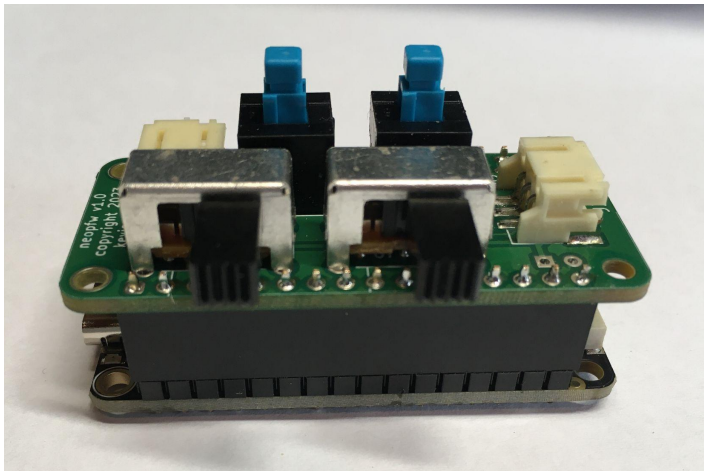
Carefully tuck the battery in between the pin headers on the featherwing so it looks like this.

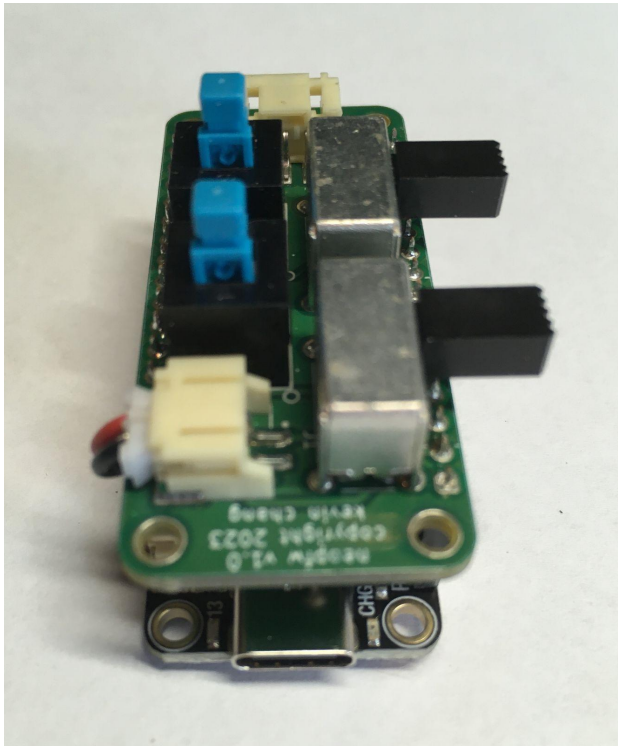


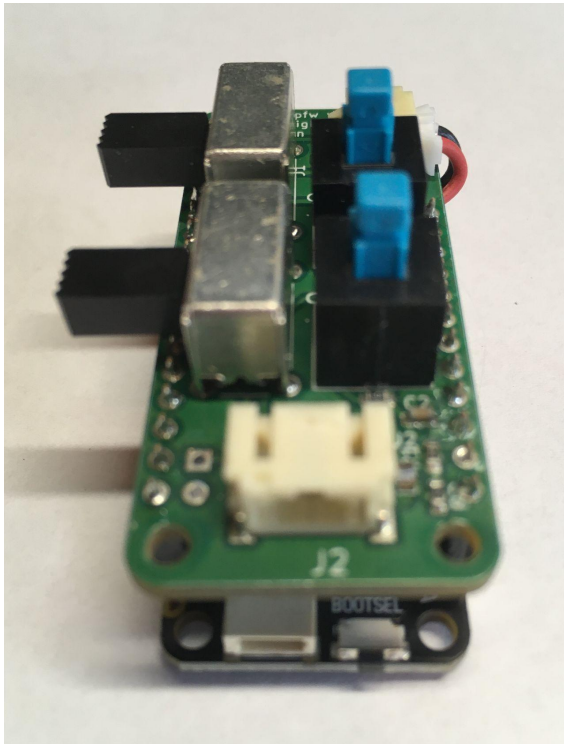
Sandwich it all together, but don’t force it. If the battery fit is too tight, it might be necessary to trim some of the through hole leads that poke down through the featherwing board. It is important to avoid puncturing the battery with the leads, so trim if necessary.



(Several more angles shown below.)







Attach the neopixels to the 3-pin JST connector. Mind the polarity: black is ground, red is the battery voltage (3.7), and white is the control signal.