Steps to Reproduce the Project

1. Install KICAD
2. Open the "prototype-board' project in the "cad" folder of the GitHub repository.
3. Use the schematics, BOM and gerber files to order copies of the PCB. Companies that manufacture PCBs include ALLPCB and JLCPCB.
4. Choose if you want to solder the board yourself or if you want the company to do it. Be advised that if you want to solder the board yourself, you will need specialised equipment as the op amps are very small and the power supply chip does not have exposed pins.
5. If you chose to solder the board yourself, order the components in the BOM provided by KICAD. If you chose to have the PCB manufacturing company solder the board for you, be sure to pay for the components at the same time as you pass the order for the board. This will allow them to order the components at the earliest and will cut down on manufacturing time.

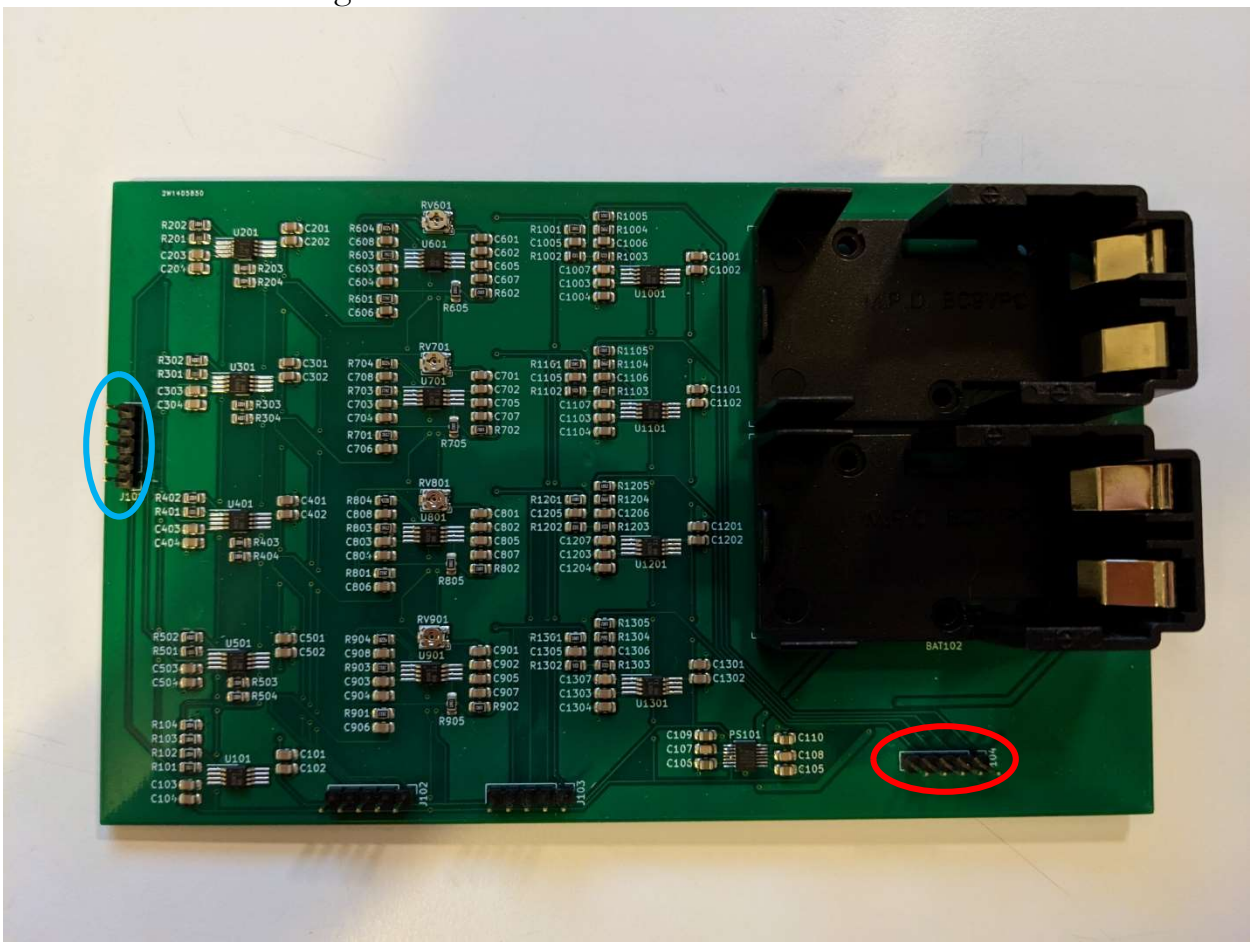

Figure 1: Prototype EEG Acquisition Board

6. Insert two 9v batteries in the battery holders
7. Connect the electrodes to the header pins circled in blue in figure 1 and the Teensy 3.2, pins A0, A1, A2, A3 and GND to the header pins circled in red in figure 1.
8. Download the Arduino software and its teensy bridge.
9. Connect the teensy to your computer with a USB cable.
10. Program the teensy with the software in the "software/teensy-code" folder in the GitHub repository
11. Use the README in the "software/gui" folder of the GitHub repository to configure the environment and to use the visualization software.
12. Before using the board, you may want to test it. To do so, use a function generator with a sinus signal at a 60 Hz frequency and an amplitude of 100 mV through a 1/1000 voltage divider. Connect the ground of the function generator to the reference electrode and the output of the voltage divider to any of the signal electrodes. There should be no output.
13. If you have an output, tweak the potentiometer associated with the channel in use until the signal disappears.
14. To test the board, change the frequency of the function generator to 40 Hz.
15. The remaining pins on the prototype board can be used to sample the signal at each step in the processing pipeline.