

- Week 1 (Mar 1 - Mar 7):
  - Plan the Hardware
    - Components Required
    - Schematics sheet / Data sheet
  - Plan the Software
    - CRC Cards
    - Sequence Diagrams
    - <https://c.ymcdn.com/sites/pmsa.site-ym.com/resource/resmgr/presentations/pmbokvsagile3.pdf>
  - Plan the Device Package
    - 3D Printed case
    - Cardboard
  - Finalize project proposal and outline
- Week 2 (Mar 8 - Mar 14)
  - Begin putting the microphone hardware together.
- Week 3 (Mar 15 - Mar 21)
  - Finish microphone setup and test functionality.
- Week 4 (Mar 22 - Mar 28)
  - Install and test all necessary audio and machine learning packages and test capabilities of BBB with a simple deep learning model.
  - Find Instrument Dataset
  - Begin audio data pre-processing for single instrument classification.
- Week 5 (Mar 29 - Apr 4)
  - Continue audio data pre-processing.
- Week 6 (Apr 5 - Apr 11)
  - Develop and test deep learning model for single instrument classification and adjust parameters as needed (quantizing for use on Beaglebone).
- Week 7 (Apr 12 - Apr 18)
  - Test microphone and deep learning model on BBB to see if it can convert sound into audio file, pre-process audio file, and classify instrument correctly.
- Week 8 (Apr 19 - Apr 25)
  - Stretch Goal 1: 3D Printed Case
- Week 9 (Apr 26 - May 2)
  - Stretch Goal 2: add all the instruments
- Week 10 (May 3 - May 9)
  - Presentation creation and practice
- Week 11 (May 17)
  - Present