Jacob

- Worked on implementation of Convolution functions for both mode 0 and mode 1.
- Worked on the restructuring of the code and variables to make functions more time-efficient.
    - The process included allocation of vectors, management of data types, management of function inputs, and minimization of vector resizing (And other vector function operations) within functions.
    - Tracked blocks of code at different stages of the project. Recording size and values and manipulated and allocated data based on project requirements to smoothen and enable operation, specifically within the live operation.
- Set-up RaspPi
- Did testing and debugging of live operation of both Mode 0 and Mode 1 for mono and stereo output on RaspPi.
- Contributed to debugging of Stereo functions.
- Worked on implementation and debugging of interleaving of stereo data.
- Adjusted LPF coefficient creation function to account for reduced value magnitude in the upsampled signal.
- Worked on almost all implemented c++ code, with the exception of transcribing Python code for Stereo to c++. Though, as mentioned above, I was involved in the debugging of the c++ code for stereo once it had been transcribed.

Yazdan

- Worked on implementation of Mode 1 with convolution/upsampling and downsampling separated
- Worked on implementation of the fm_demod function to create a computational friendly approximation of the tan function with state saving in c++
- Generated the estimatePSD graph data for Mono 0 and 1 for debugging
- Worked on implementation of the fmStereo.py (a python implementation of stereo in mono 0)
- Reimplementation of the working fmStereo.py into c++
- Debugged PLL with generated graph data at the end and beginning of blocks thus added state saving functionality
- Assisted in debugging Mode 1 in c++

Kevin

- Worked on implementation of Mode 0 convolution functions

- Helped with debugging of various issues when implementing code from previous labs into mode 0
- Translated fm_demod function from python to C++
- Created upsampler block function for mode 1
- Working on the implementation of stereo + PLL in python
- Implemented stereo + PLL from python into C++
- Spent time debugging implementation of C++ stereo into main code
- Assisted in debugging of mono 1 once implemented into the main code

Allen

- Generated estimatePSD plots for mono mode 0/1
- Debugged lab work implementation issues (that were common between both original pairs)
- Worked on optimizing/debugging Mode 0 and Mode 1 convolution, including methods for downsampling Mode 0, upsampling and downsampling for Mode 1
- Worked on python PLL implementation
- Debugging stereo in C++
- Worked on debugging PLL

We have not interacted or collaborated with anyone outside of our own group members, Professor Nicola, and TA's.