

Time Sheet			
Name	Week	Time (mins)	Task
Ash	11	120	Research Mic and Speaker Drivers
Benjamin	11	60	Conceptualization of FFT module
Jacob	11	240	Research on how to create a state machine
Xiyaun	11	120	Research how to present the LED
Ash	12	210	Research and Testing
Benjamin	12	60	Basic preparatory layout work for FFT module
Jacob	12	420	Implementation of state machine, simulated functional code
Xiyaun	12	80	Figuring how to use the LED Matrix
Ash	13	180	Building Test Circuit/Fabricating project artifacts
Benjamin	13	660	Writing, rewriting of code and research on accomplishing the FFT in hardware
Jacob	13	160	Demonstrated state machine is functional, applied fixes learned during block checkoff
Xiyaun	13	130	Research whether any LED driver can control the LED Matrix
Ash	14	240	Design Review Prep, pre and post research on OpAmps, and ADC notes
Benjamin	14	540	Writing and rewriting of FFT systemverilog code
Jacob	14	240	Research different ways to implement the user interface
Xiyaun	14	140	Test the FPGA to control the LED Matrix directly
Ash	15	300	Finalize Speaker Driver, test variants of Microphone driver
Benjamin	15	480	FFT code revision, conceptualization and preparatory work on oscillator module
Jacob	15	260	Create the RGB LED circuit, purchase buttons, knobs and slider
Xiyaun	15	200	Research how to use the MAX7219 LED driver
Ash	16	120	Research circuitry, draw up schematics
Benjamin	16	480	Oscillator module revision, PCB design
Jacob	16	160	Showed better state machine and functional RGB LED circuit during block checkoff
Xiyaun	16	120	Implementation of the row scan on the LED Matrix
Ash	17	120	Testing Microphone block, researching ADC characteristic behavior
Benjamin	17	300	Oscillator and FFT finalization
Jacob	17	200	Worked on applying multiple current limiting resistors in RGB LED circuit
Xiyaun	17	130	Research how to cooperate the LED matrix with the MAX7219
Ash	18	240	Draw timing diagrams, write arduino test code for ADC.
Benjamin	18	300	Oscillator testing, memory module research, top-level verilog file writing
Jacob	18	200	Made drill holes for the box, began work on project artifacts
Xiyaun	18	120	Implement two LED matrix work together
Ash	19	700	Model Enclosure in Fusion 360, Assemble project for system verification

Benjamin	19	1000	Top-level file creation, artifact creation, memory module reasearch/creation
Jacob	19	900	Finalization of project artifacts, implementation of the project on the box
Xiyaun	19	870	Reconstruct the top-level diagram and user interface