

University of Massachusetts Lowell
Department of Electrical and Computer Engineering
16.5200 Computer Aided Engineering Analysis
EECE Set 7

In HW7.d there are two directories labeled *2020_glfw.d* and *2020_glut.d*. The prototype codes therein are to help you to build either an oscilloscope or spectrograph (time-frequency analyzer). These applications will rely on 2D graphics and audio output. You will use a wavefile as your input signal.

- a. You are to load `opengl`, `opengl`, `freeglut`, `glfw`, `glew`, `glad`, etc. The successful compilation, execution of the sample programs is sought. I have provided the source code for `glfw` (glfw.org) for source level build purposes. Programs utilize mostly 2D graphics one program is 3D. The 2D programs display a sine wave and x and y axes. These programs must run on your machine not the server.
- b. Modify the keyboard callback in each program such that the signal wave moves to the right when key (r) is pressed, left (l), amplitude up (u) and amplitude down (d).
- c. Modify color scheme (line color,width,background) to suit your taste.