6.111 Final Project Checklist

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Commitment:

- LED controller is completed and functional
    - Module that takes in RGB data and outputs SPI signals to control LED strip
    - Will be demonstrated using test program that outputs patterns to stationary LED strip
- Image mapper is completed and functional
    - Module that outputs pixel values based on current angle of device
    - Will be demonstrated using test program that outputs image on VGA display
- Hardware built and functional
    - Will be demonstrated by showing spinning device with all components mounted
- Rotation sensor module functional
    - Module that counts pulses from IR sensor and outputs current angle of device
    - Will be demonstrated using test fixture with mocked inputs as well as test program on device itself that lights LED strip to show current angle at slow speed

Goal:

- Device is able to rotate and display an image
    - Demonstrated by demo of full integrated device working

Stretch Goal:

- Second LED strip is incorporated into the hardware and used to increase vertical resolution
    - Demonstrated by having demo where we show a higher resolution image on the display (can potentially have it toggle between two resolutions to illustrate)
- Video is displayed on the device
    - Demonstrated by designing and loading an animation and proving that we can display it on the device
- Bluetooth for wireless interaction
    - Demonstrated by designing a demo where user can interact with device for calibration or tweaking image being display