Main Microcontroller Project Loop

The main.ino file is the entry point for the Nanolux microcontroller code. As such, it has many jobs, such as managing program loop length times, running the LED strip, processing patterns, and running the audio analysis pipeline. Many of these jobs are outsourced to other files, but have their main call in main.ino. This file also initializes all global variables that have their first use in main.ino.

setup():

The setup function is ran once upon device power up. It has a few roles:

- Initializing pin output for the built in LED and external LED strip
- Beginning Serial output
- Loading and verifying saves from the NVS
- Starting device reset timer functionality

run_strip_splitting():

The strip splitting function is the backbone of the Nanolux main loop. It contains the ability to both run a singular pattern and split the strip into multiple separate patterns.

The function first calculates the number of pixels per running pattern. Then, for each running pattern: