User Interface Module

The user interface module consists of a display screen and a recording switch. These two components serve two main functions. First, the recording switch allows the user to trigger the microcontroller to start recording data. Otherwise, the microcontroller would not know when to expect incoming audio data, and the analysis process would be unnecessarily complicated and power consuming. Secondly, the display screen allows the user to observe the results of the pneumonia classification. The simplest way to trigger the microcontroller is via a simple pushbutton switch connected to one of its digital inputs. The *Adafruit Tactile Button Switch* was chosen.

The result of the signal analysis process is a percentage likelihood that the given patient has pneumonia. The simplest and most cost effective method to display this data is with a 2-digit display. One of the simplest display types for digits is the 7-segment display. Thus, the *LUMEX 0.5in 2-Digit 7-Segment Display* was chosen, for both low-cost and convenience.