Assignment 2

DSP 2023

In the lectures and videos we have shared, we have discussed the processing of data to extract information. The data files attached to this assignment have been collected from a sensor designed to monitor heart rate as well as blood oxygen levels. We are interested only in the pulse measurement. Normally, the pulse rate is estimated by counting the number of pulses over a fixed period of time. For example, 72 beats per minute. Another component can also be estimated, the variance of the pulse rate. This parameter is generally referred to as heart rate variability (HRV) and is particularly useful in detecting sepsis in pediatric patients. There is a resurgence in the this measurement related to a general health metric.

Using Matlab, develop a script that estimates HRV in this data. Submit in Livescript and a pdf.

I will discuss it a bit in class before the assignment is due and immediately following. We’ll play with it off and on during the semester.