Run #1

October 18, 2018

Abstract

This is an attempt to try and describe how modeling the delta function as a continuous function. Right now I'm considering an extremely simple situation, where I just have a flat region with a single delta function. I approximate this delta function as a triangle, and I'm trying to figure out how the width of this triangle affects its accuracy.

1 Generating phonon distributions

I generated the pretend phonon distributions using the "generateInput.py" code. This created a series of 5 fake frequency distributions, shown below. These distributions are generated between 0 and 1, with a spacing of 0.01. The delta function is to be located at 0.5, and the area of the delta function is to be held at 0.2, while the area of the continuous piece (the flat piece) is to be held at 1.0.

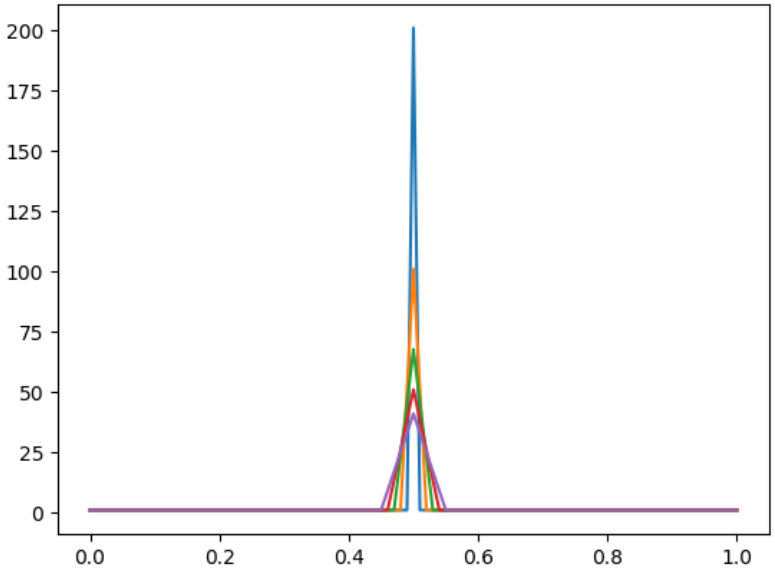

Figure 1: Fake frequency distributions of run 1. For this I consider five different continuous representations of a delta function, each a triangle with varying width.