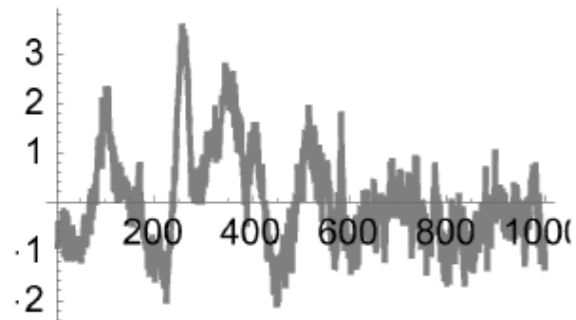
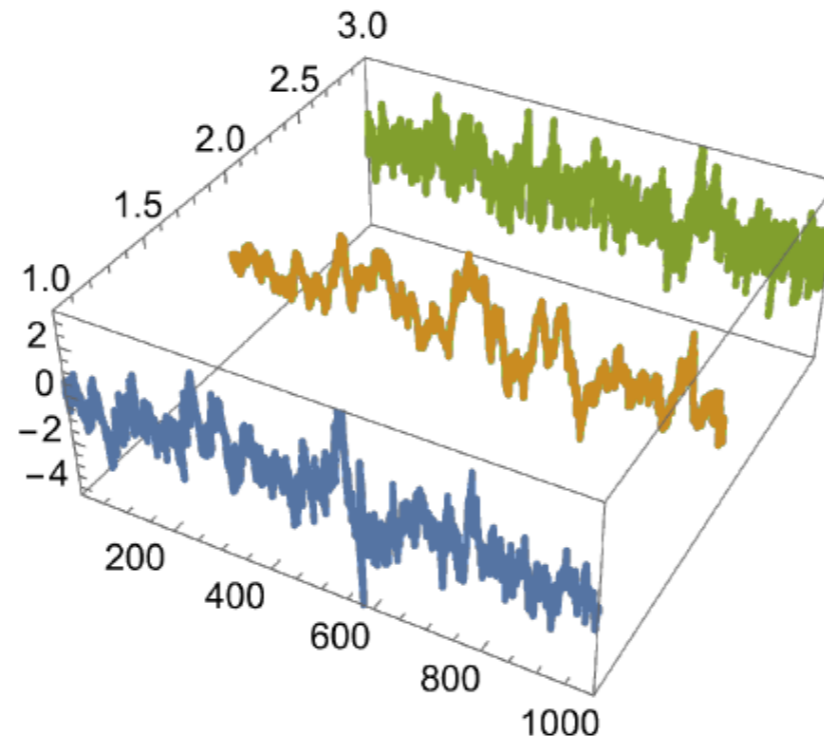


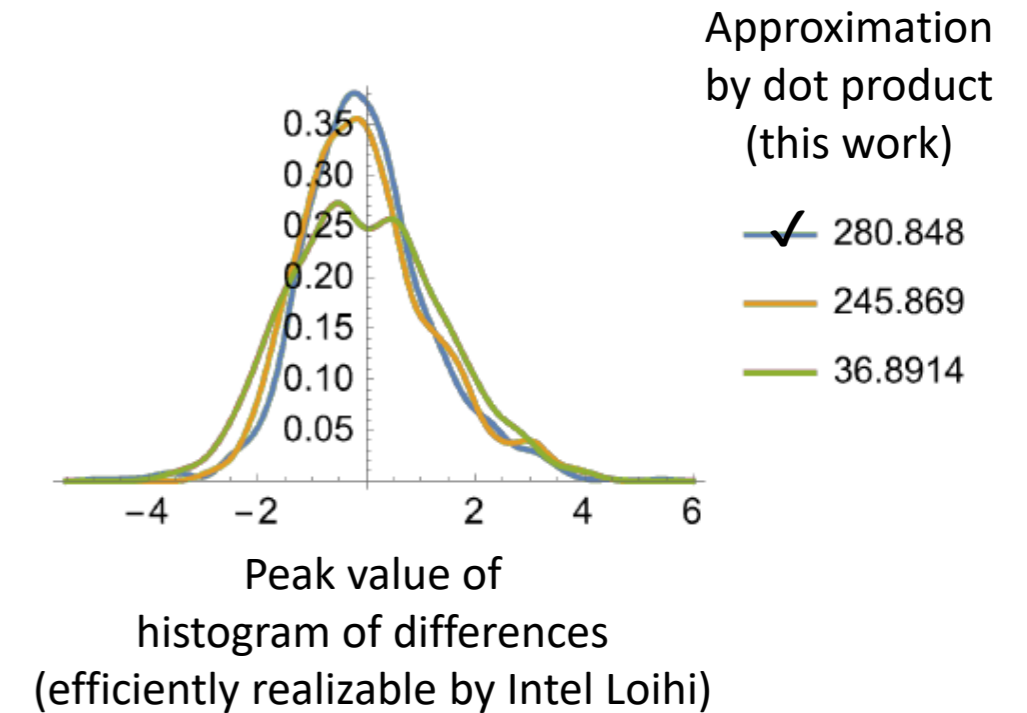
Shifted and rescaled spectra



Ideal spectra per class



Class probabilities



[10] Ho, Chi-Sing, et al. "Rapid identification of pathogenic bacteria using Raman spectroscopy and deep learning." *Nature communications* 10.1 (2019): 4927.

Table 1: Test accuracy (%)

ResNet-26	Coincidence detection
82.2 ± 0.3 (from [10])	82.7 (this work)

Avenues for future work: Validate this method on **more datasets** and demonstrate learning in **spiking neural network** hardware.