# Just an Idea

February 6, 2023

# Input Histograms

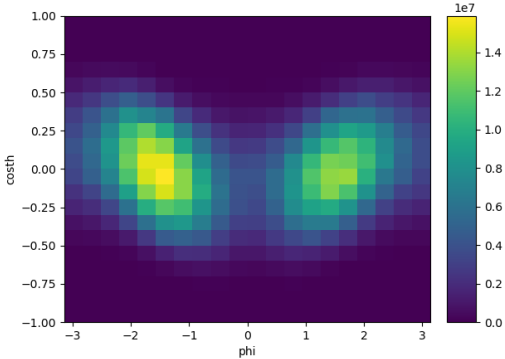



Figure 1: 2D histogram used for training.

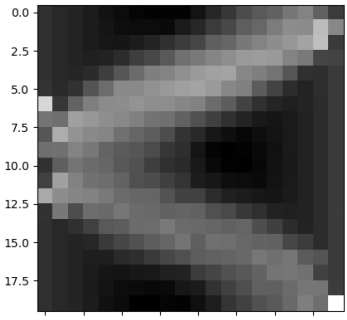



Figure 2: Image of the 2D histogram. This is a conisdered as a 20 x 20 pixel imgage. Each histogram is scaled by the standard scalar.

- 100K histograms were generated randomly with $\lambda, \mu, \nu$ (as targets) in range [-1.0, 1.0] and they are split in to train: validation = 70: 30.

# CNN Architecture

# Loss Curve

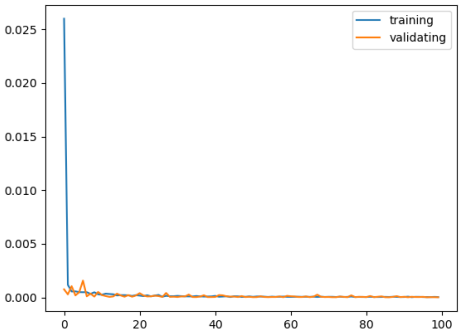
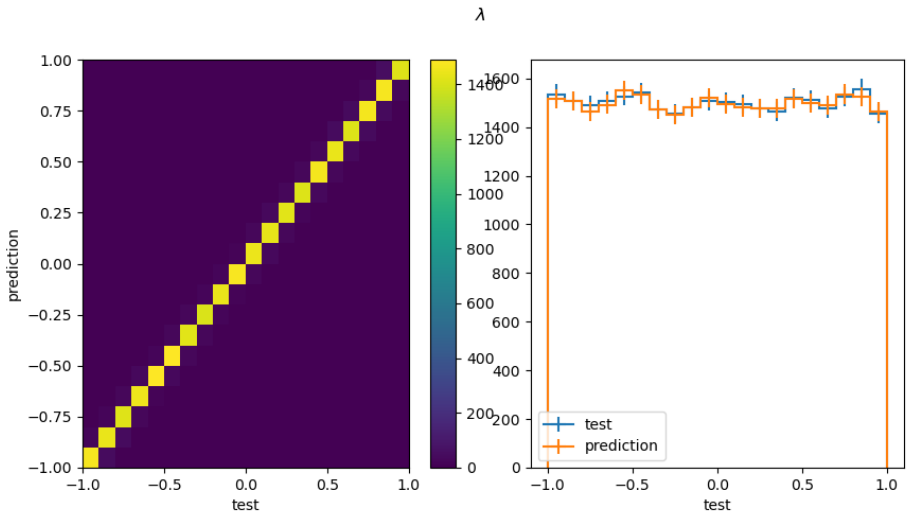
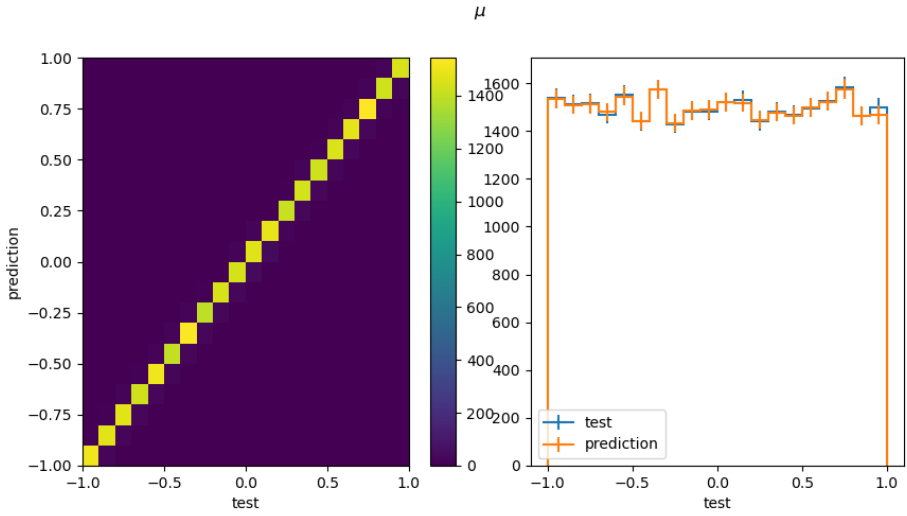



Figure 3: Loss curve.

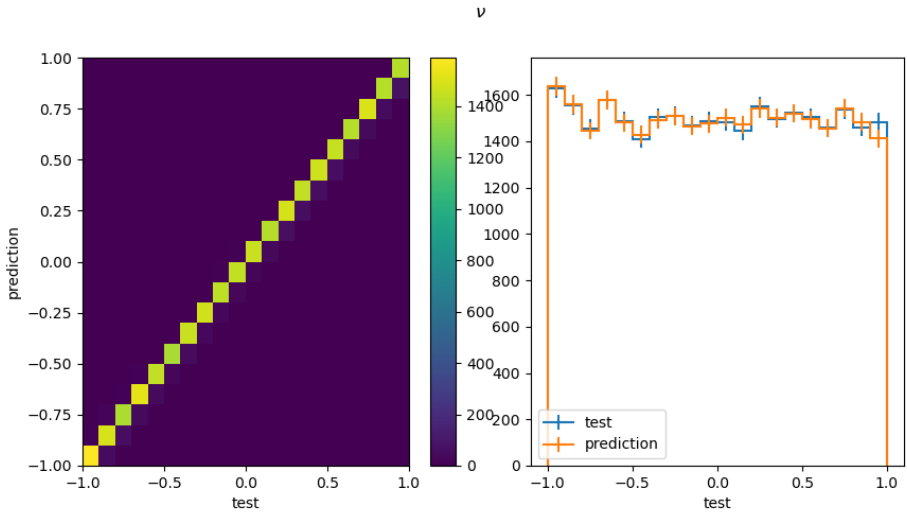
# Test: $\lambda = \texttt{uniform}(-1., 1.0)$



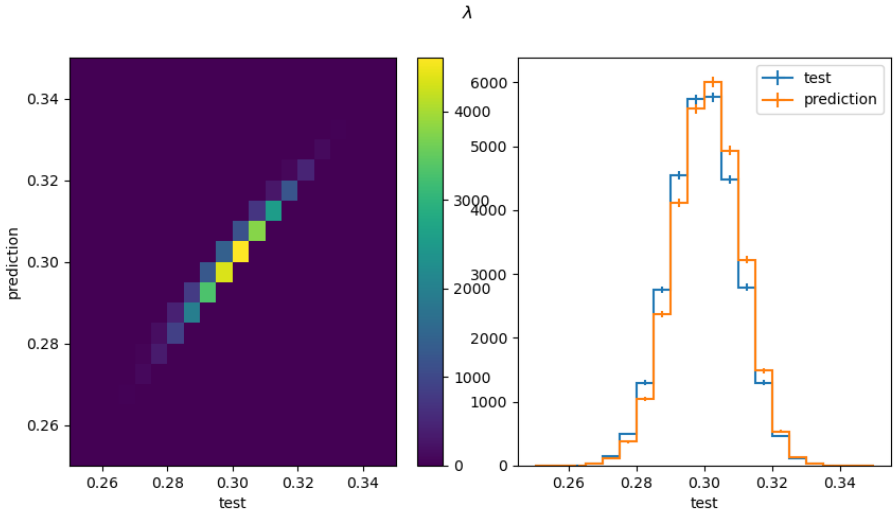
# Test: $\mu = \texttt{uniform}(-1., 1.0)$



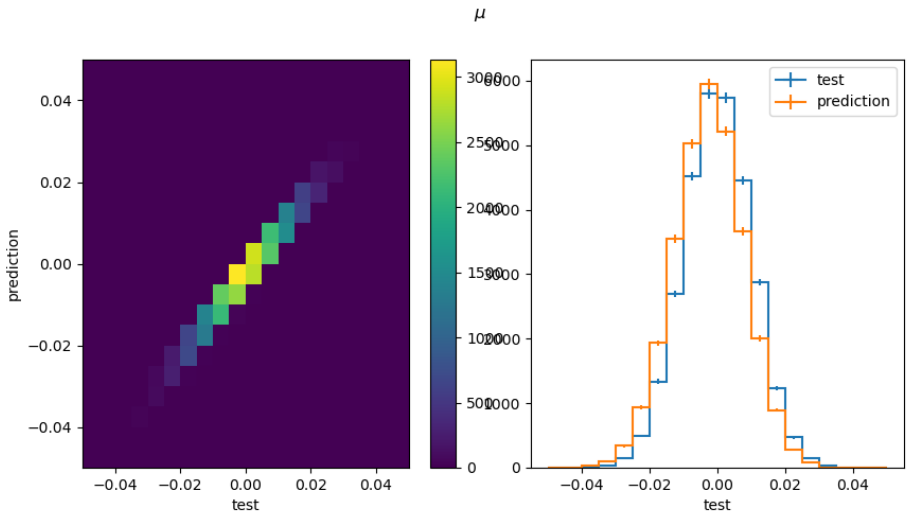
# Test: $\nu = \texttt{uniform}(-1., 1.0)$



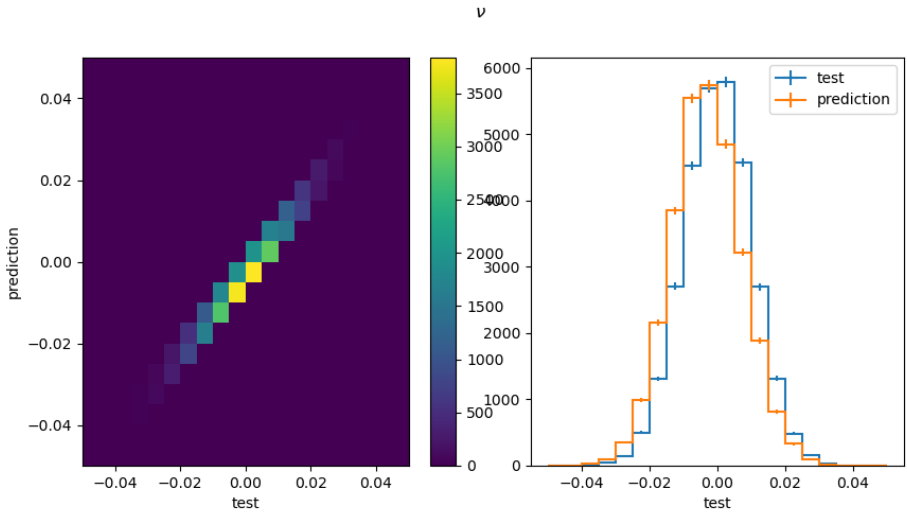
# Test: $\lambda = \mathtt{gaus}(0.3, 0.01)$



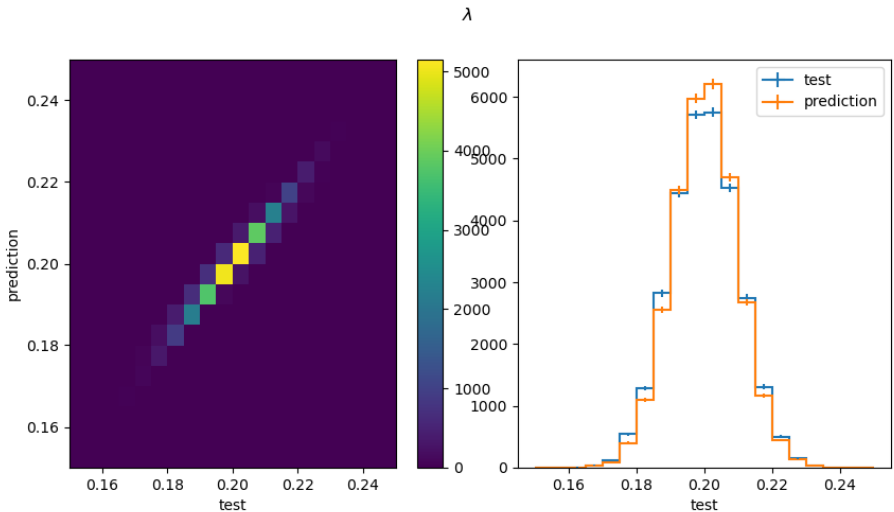
# Test: $\mu = \texttt{gaus}(0.0, 0.01)$



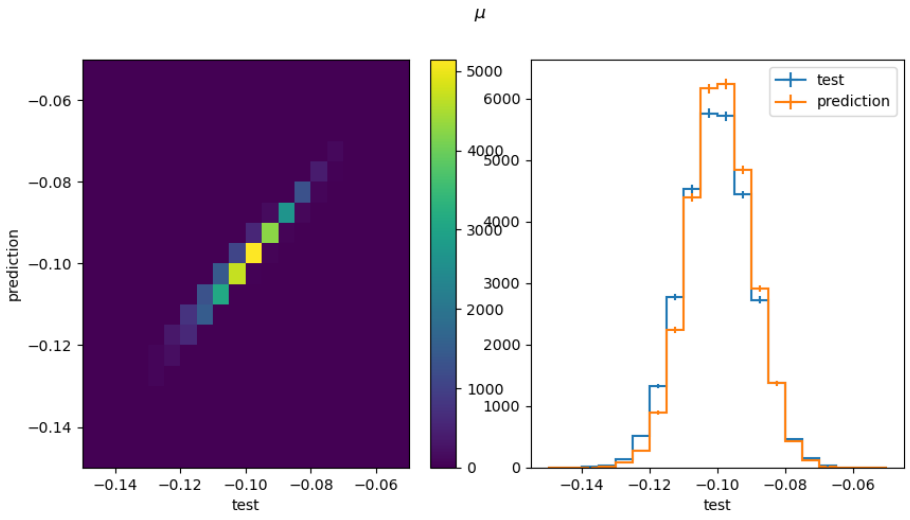
# Test: $\nu = \mathsf{gaus}(0.0, 0.01)$



# Test: $\lambda = \mathtt{gaus}(0.2, 0.01)$



# Test: $\mu = \texttt{gaus}(-0.1, 0.01)$



# Test: $\nu = \texttt{gaus}(0.1, 0.01)$