WF Neural Network

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Introduction to CNN WF Framework:
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Concepts Involved in Order:

- Bayesian Parameter Selection Method (or BF method) compare effectiveness of the methods
- Entropy (or cross entropy)
- EMA (returns and Std.)
- Sharpe (or information Ratio)
- Results measured w/ CAGR, Risk, **Sharpe**

Single Layer Perceptron Inputs:

Goal: Maximize Risk Adj returns in Param Selection

- Entropy of window (risk oriented)
- EMA of returns (Return oriented)
- 1/N month EMA of STD (risk oriented)

Other Considerations Before Design:

- Error Tolerance for out of sample WF compared to training set
- Need to set an Error Tolerance Level because the method can't be overfit

Initial Design Before Implementing:

Creating Training Set:

- Choose optimal parameter set for the given time period from our p(x) sample distribution. (Optimal based on Sharpe)
- Calculate CAGR for Training window
- Calculate Std
- Calculate Sharpe based on two above measures

Creating Out of Sample Data:

Note: Make sure MCMC empirical mean is the same as actual mean with 95% confidence. (or Sharpe of Index Fund)