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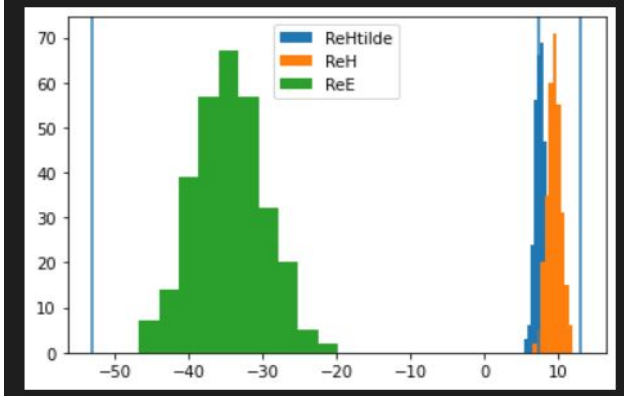
Last Meeting Discussion

- Currently two main different method 2s (How to compare results from new methods?)
  1. Resetting weights after each replica (pure bootstrapping)
  2. Resetting weights after each set (Nick's method 2)

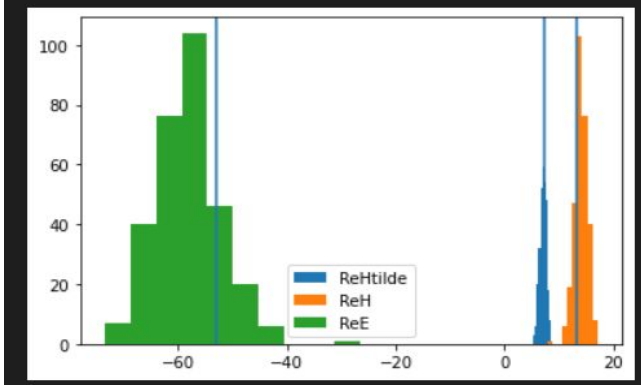
```
pureBootsrap = pd.read_csv("PureBootstrap-0.csv")
plotHis(pureBootsrap)
calcMeanAndStd(pureBootsrap)
```

```
[9.4501, -34.5591, 7.5793] [0.9228, 4.7298, 0.7032]
```




```
method2 = pd.read_csv("Method2-0.csv")
plotHis(method2)
calcMeanAndStd(method2)
```

```
[13.9682, -57.8101, 7.0931] [1.1753, 6.0453, 0.6264]
```



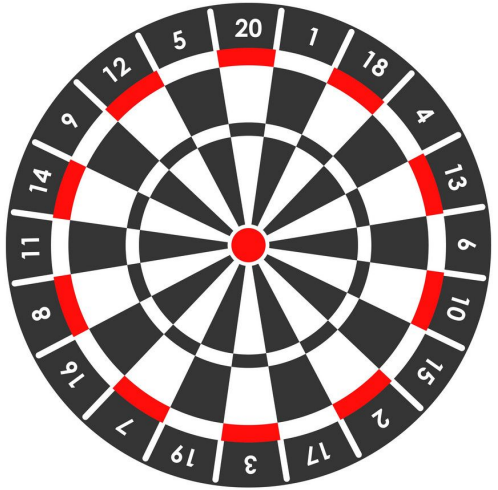
Baseline

Constants:

- Epochs: 2500
- Replicas: 300
- Hidden Layer Neurons: 20
- Batch Size: 32
- Structure
- Loss Function

Way to Combine Methods?

- Why is pure bootstrapping yield not as accurate
- Analogous to try and training a newbie on hitting bullseyes and then doing that over again for each new replica
- What if we start training someone who is already somewhat experienced so doesn't take as long to train but still maintains the spirit of bootstrapping?



Experiment

- Get random weights
- Train them a bit on the input data
  - 30 iterations/samples of 2500 epochs
- Save those weights as the starting weights
- Do bootstrapping with those weights (resetting weights after each replica)

Saves a lot of computation time as each replica doesn't need 2500 epochs and still gets good accuracy with lower deviation

```
exp0 = pd.read_csv("Experimental-0.csv")
plotHis(exp0)
calcMeanAndStd(exp0)
```

```
[13.7233, -56.5359, 7.247] [0.961, 4.9332, 0.6245
```