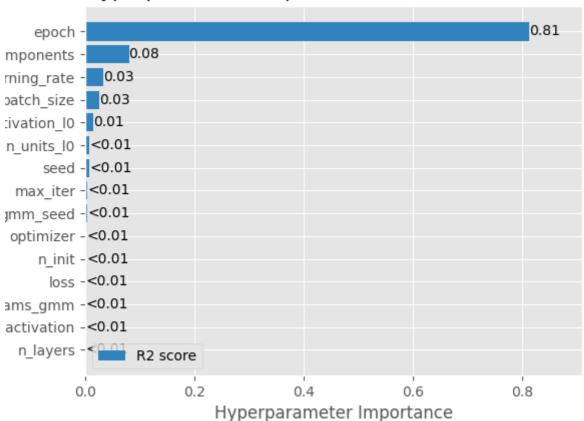
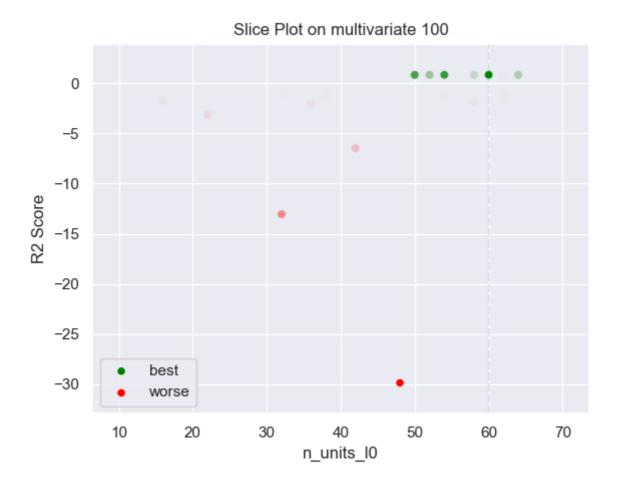
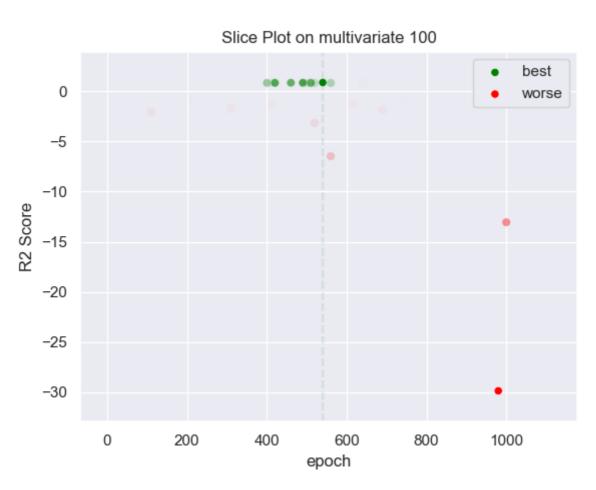
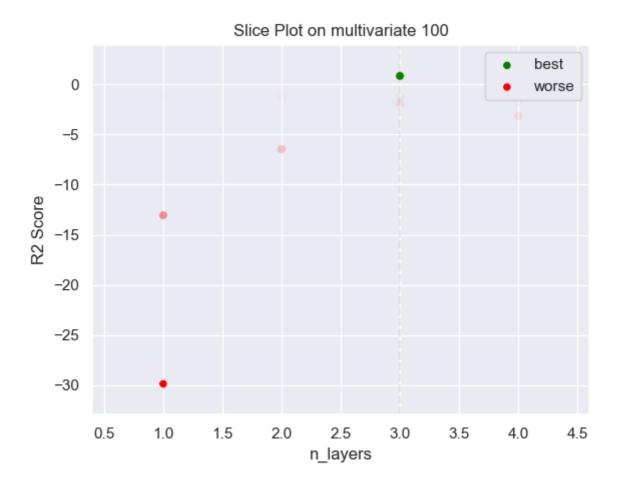
# MLP GMM 100 multivariate

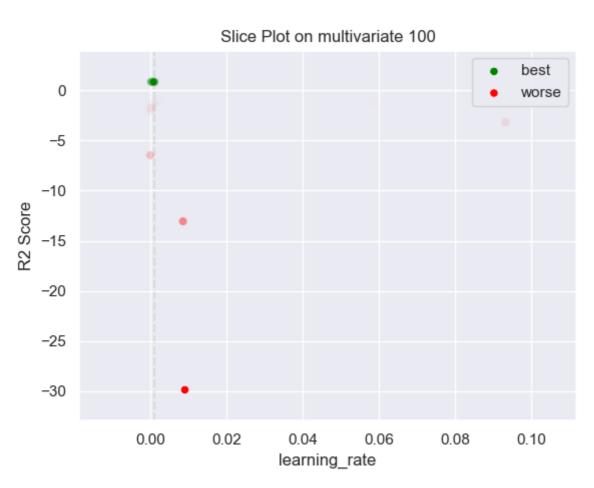
# Hyperparameter Importances

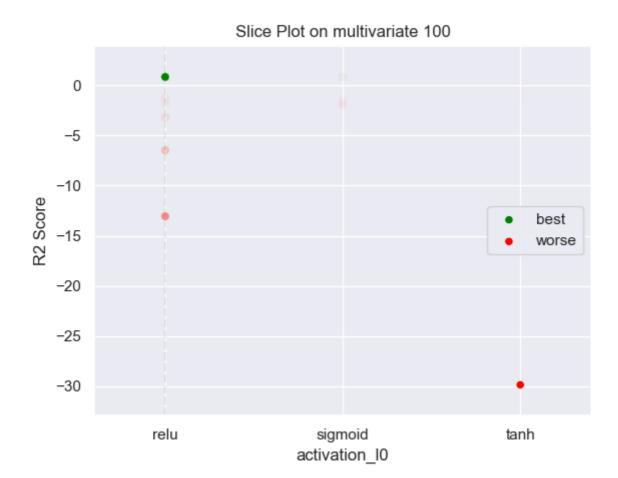


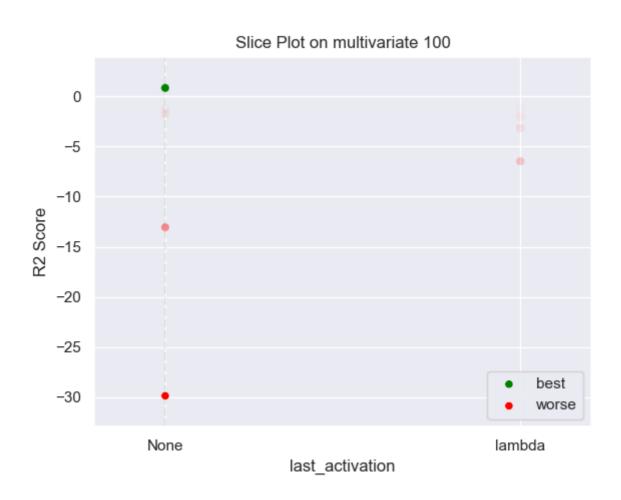


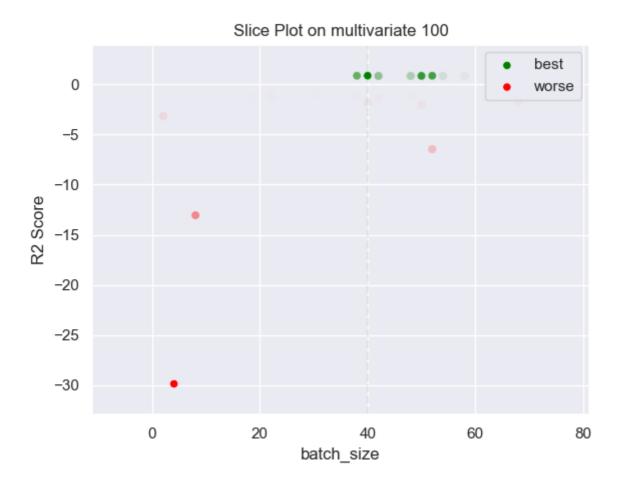


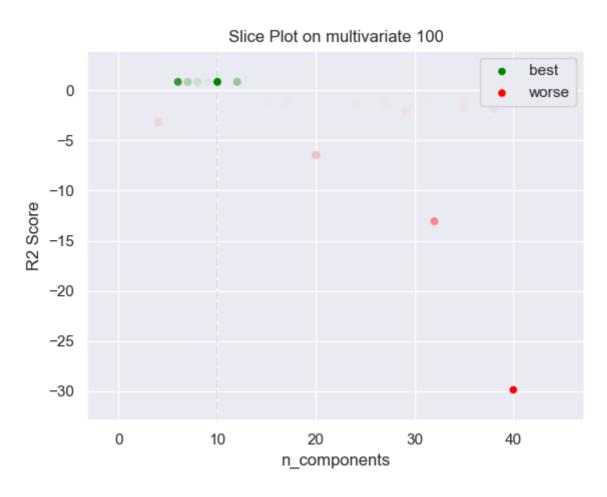












## • R2 score: **0.89178926**

seed: 75n\_init: 100max\_iter: 80

• n\_components : 10

• gmm\_seed: 96

o init\_params\_gmm : k-means++

n\_layers: 3
n\_units\_IO: 60
activation\_IO: relu
n\_units\_I1: 30
activation\_I1: relu

o n\_units\_I2 : 44

activation\_I2 : tanhlast\_activation : None

• learning\_rate: 0.0009981718351141132

o epoch: 540

o optimizer: RMSprop

loss: mse\_lossbatch\_size: 40

### • R2 score: **0.87038104**

seed: 69n\_init: 100max\_iter: 70

• n\_components : 10

 $\circ$  gmm\_seed: 86

• init\_params\_gmm : k-means++

n\_layers: 3
n\_units\_IO: 54
activation\_IO: relu
n\_units\_I1: 26

• activation\_I1 : relu

o n\_units\_I2 : 44

activation\_I2 : tanhlast\_activation : None

o learning\_rate: 0.0002703192766690984

epoch: 490optimizer: Adamloss: huber\_lossbatch\_size: 52

## • R2 score: **0.86488257**

seed : 86n\_init : 100

o max\_iter: 50

• n\_components: 6

• gmm\_seed: 78

o init\_params\_gmm: k-means++

• n\_layers: 3

o n\_units\_I0: 60

o activation\_IO: relu

o n\_units\_I1:30

o activation\_I1 : relu

o n\_units\_I2: 44

o activation\_I2: tanh

o last\_activation: None

o learning\_rate: 0.0008140896367081241

o epoch: 460

o optimizer: Adam

o loss: mse\_loss

o batch\_size: 38

### WORST 3

• R2 score: -29.86491979

o seed: 75

o **n\_init** : 100

• max\_iter: 80

• n\_components : 10

• **gmm\_seed**: 96

• init\_params\_gmm : k-means++

• n\_layers: 3

o n\_units\_I0: 60

o activation\_IO: relu

o **n\_units\_I1**: 30

o activation\_I1: relu

o n\_units\_I2: 44

o activation\_I2: tanh

o last\_activation: None

• learning\_rate: 0.0009981718351141132

o epoch: 540

o optimizer: RMSprop

• loss: mse\_loss

o batch\_size: 40

• R2 score: -13.05341671

o seed: 69

o n\_init: 100

• max\_iter : 70

• n\_components : 10

• **gmm\_seed**: 86

• init\_params\_gmm : k-means++

n\_layers : 3n\_units\_I0 : 54

o activation\_IO: relu

o n\_units\_I1: 26

o activation\_I1 : relu

o n\_units\_I2: 44

activation\_I2 : tanhlast\_activation : None

o learning\_rate: 0.0002703192766690984

epoch: 490optimizer: Adamloss: huber\_lossbatch\_size: 52

### • R2 score: -6.46178368

◦ seed : 86

n\_init : 100max\_iter : 50

• **n\_components**: 6

• gmm\_seed: 78

• init\_params\_gmm : k-means++

 $\circ$  n\_layers : 3

o n\_units\_I0: 60

• activation\_IO: relu

o n\_units\_I1:30

o activation\_I1: relu

• n\_units\_I2 : *44* 

o activation\_I2: tanh

• last\_activation : None

o learning\_rate: 0.0008140896367081241

• **epoch**: 460

o **optimizer**: Adam

• loss: mse\_loss

• batch\_size: 38