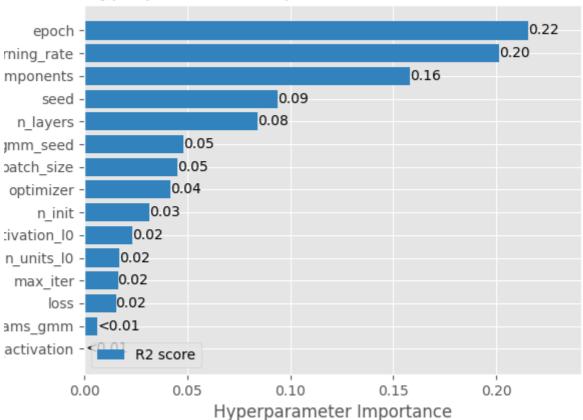
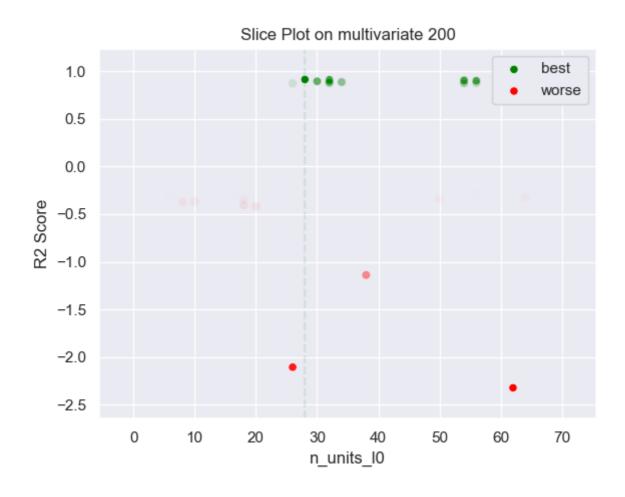
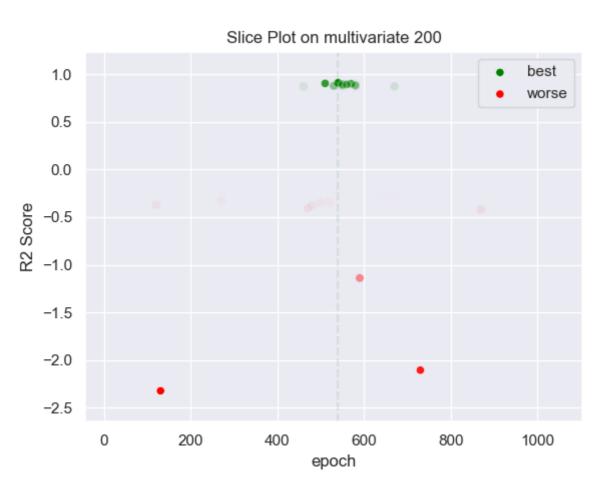
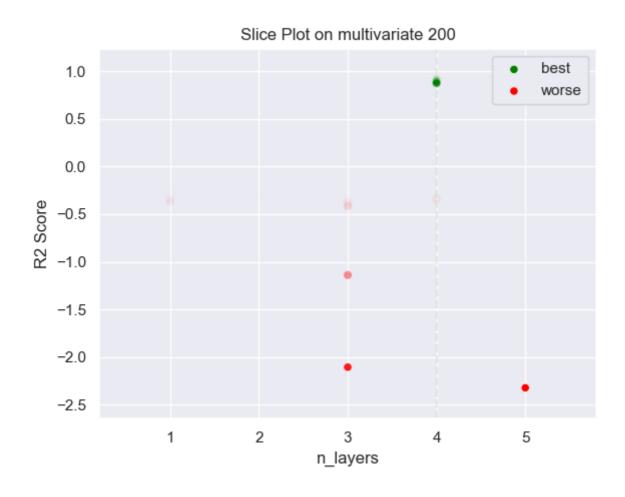
## MLP GMM 200 multivariate

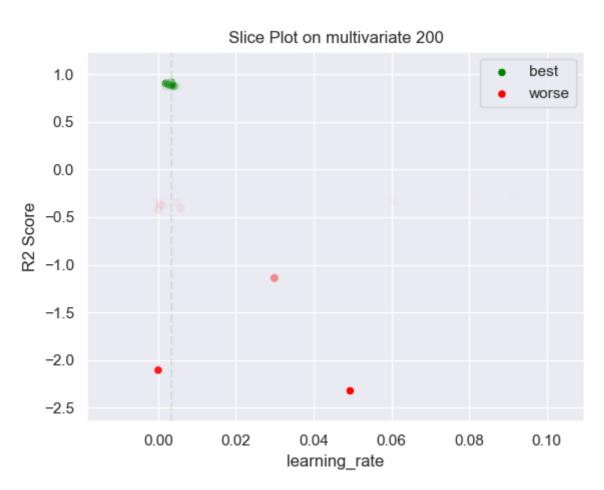
# Hyperparameter Importances

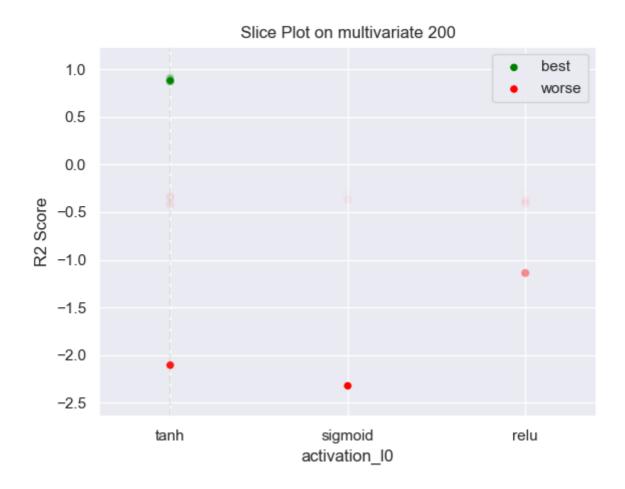


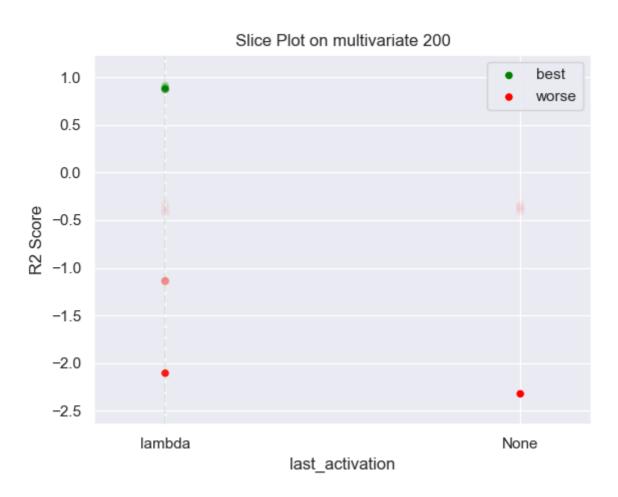


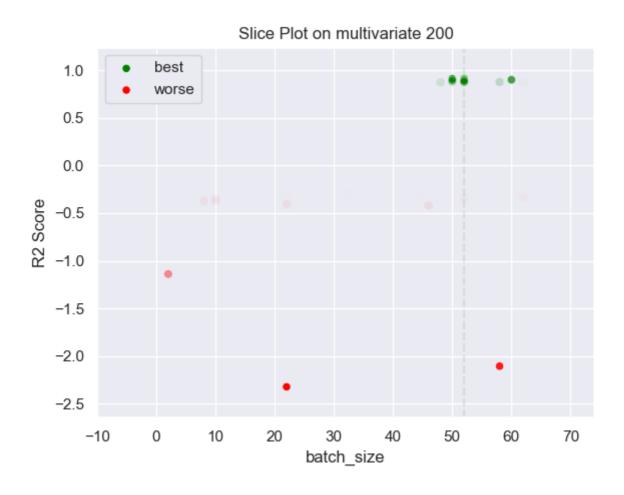


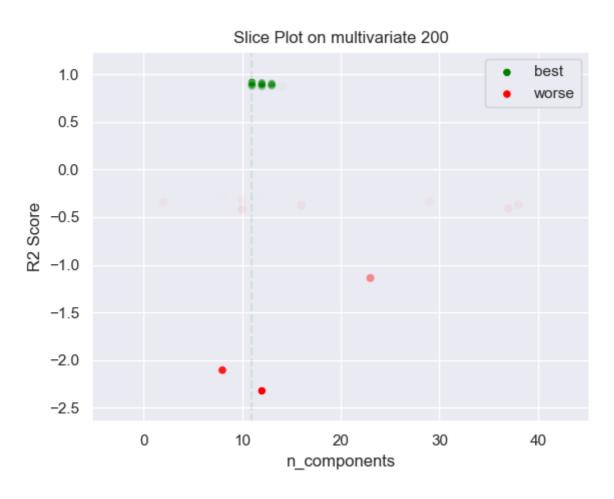












#### • R2 score: **0.91327032**

• seed : 31

o n\_init : 20

• max\_iter : 100

• n\_components : 11

• **gmm\_seed**: *37* 

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

o n\_layers: 4

o n\_units\_I0: 28

o activation\_IO: tanh

o n\_units\_I1: 20

• activation\_I1 : sigmoid

o n\_units\_I2: 34

activation\_I2 : sigmoid

o n\_units\_I3: 26

o activation\_I3: tanh

• last\_activation : lambda

o learning\_rate: 0.003454947958915411

o epoch: 540

o optimizer: Adam

o loss: huber\_loss

• batch\_size: 52

#### • R2 score: **0.90986568**

o seed: 42

o n\_init: 10

• max\_iter: 80

o n\_components: 12

• **gmm\_seed**: 56

• init\_params\_gmm : k-means++

o n\_layers: 4

o n\_units\_I0: 32

o activation\_IO: tanh

o n\_units\_I1 : 18

• activation\_I1 : sigmoid

o n\_units\_I2:36

• activation\_I2 : sigmoid

o n\_units\_I3: 14

o activation\_I3: tanh

o last\_activation : lambda

o learning\_rate: 0.002640146742608952

o epoch: 540

o optimizer : Adam

loss: huber\_lossbatch\_size: 50

#### • R2 score: **0.90366254**

seed : 25n\_init : 30max\_iter : 80

• n\_components : 12

• **gmm\_seed**: 32

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

n\_layers: 4
n\_units\_IO: 54
activation\_IO: tanh
n\_units\_I1: 22

• activation\_I1 : sigmoid

o n\_units\_I2: 40

o activation\_I2: sigmoid

n\_units\_I3: 30activation\_I3: tanhlast\_activation: lambda

• learning\_rate: 0.001952324510714249

epoch: 510optimizer: Adamloss: huber\_lossbatch\_size: 52

### WORST 3

• R2 score: -2.32271669

seed: 31
n\_init: 20
max\_iter: 100
n\_components: 11

• **gmm\_seed**: *37* 

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

n\_layers: 4
n\_units\_IO: 28
activation\_IO: tanh
n\_units\_I1: 20

o activation\_I1 : sigmoid

o n\_units\_I2: 34

• activation\_I2 : sigmoid

n\_units\_I3 : 26activation\_I3 : tanhlast\_activation : lambda

o learning\_rate: 0.003454947958915411

epoch: 540optimizer: Adamloss: huber\_loss

- batch\_size: 52
- R2 score: -2.10625894

seed: 42n\_init: 10

• max\_iter: 80

o n\_components: 12

o gmm\_seed: 56

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

n\_layers : 4n\_units\_I0 : 32activation\_I0 : tanh

o **n\_units\_I1**: 18

o activation\_I1: sigmoid

o n\_units\_I2:36

o activation\_I2: sigmoid

n\_units\_I3 : 14activation\_I3 : tanh

• last\_activation : lambda

o learning\_rate: 0.002640146742608952

epoch: 540optimizer: Adamloss: huber\_lossbatch\_size: 50

#### • R2 score: -1.13914786

seed: 25n\_init: 30max\_iter: 80

• n\_components : 12

• **gmm\_seed**: 32

• init\_params\_gmm : k-means++

n\_layers : 4
n\_units\_IO : 54
activation\_IO : tanh
n\_units\_I1 : 22

• activation\_I1 : sigmoid

o n\_units\_I2: 40

o activation\_I2: sigmoid

n\_units\_I3: 30activation\_I3: tanhlast\_activation: lambda

o learning\_rate: 0.001952324510714249

epoch: 510optimizer: Adamloss: huber\_loss

• batch\_size: 52