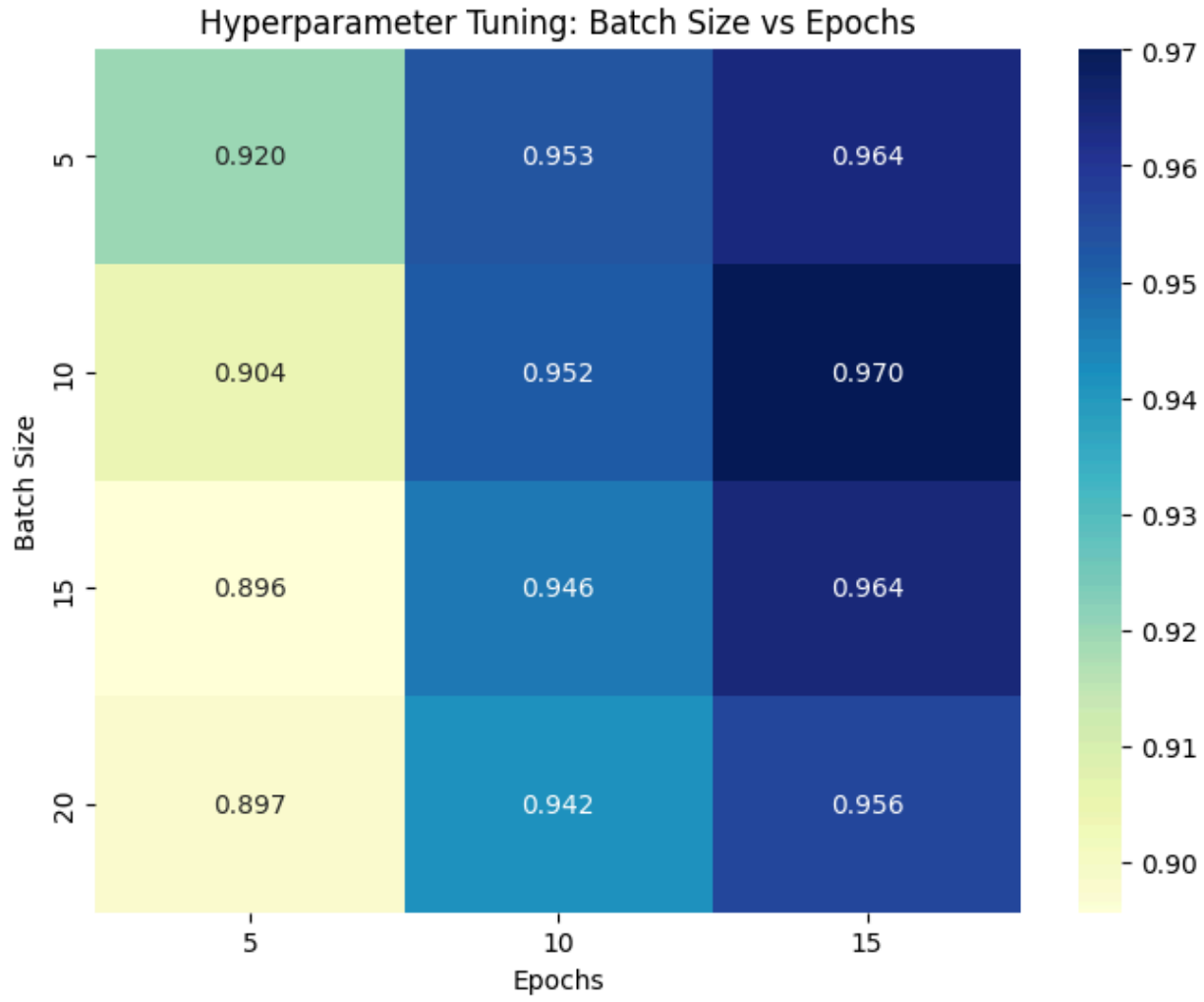
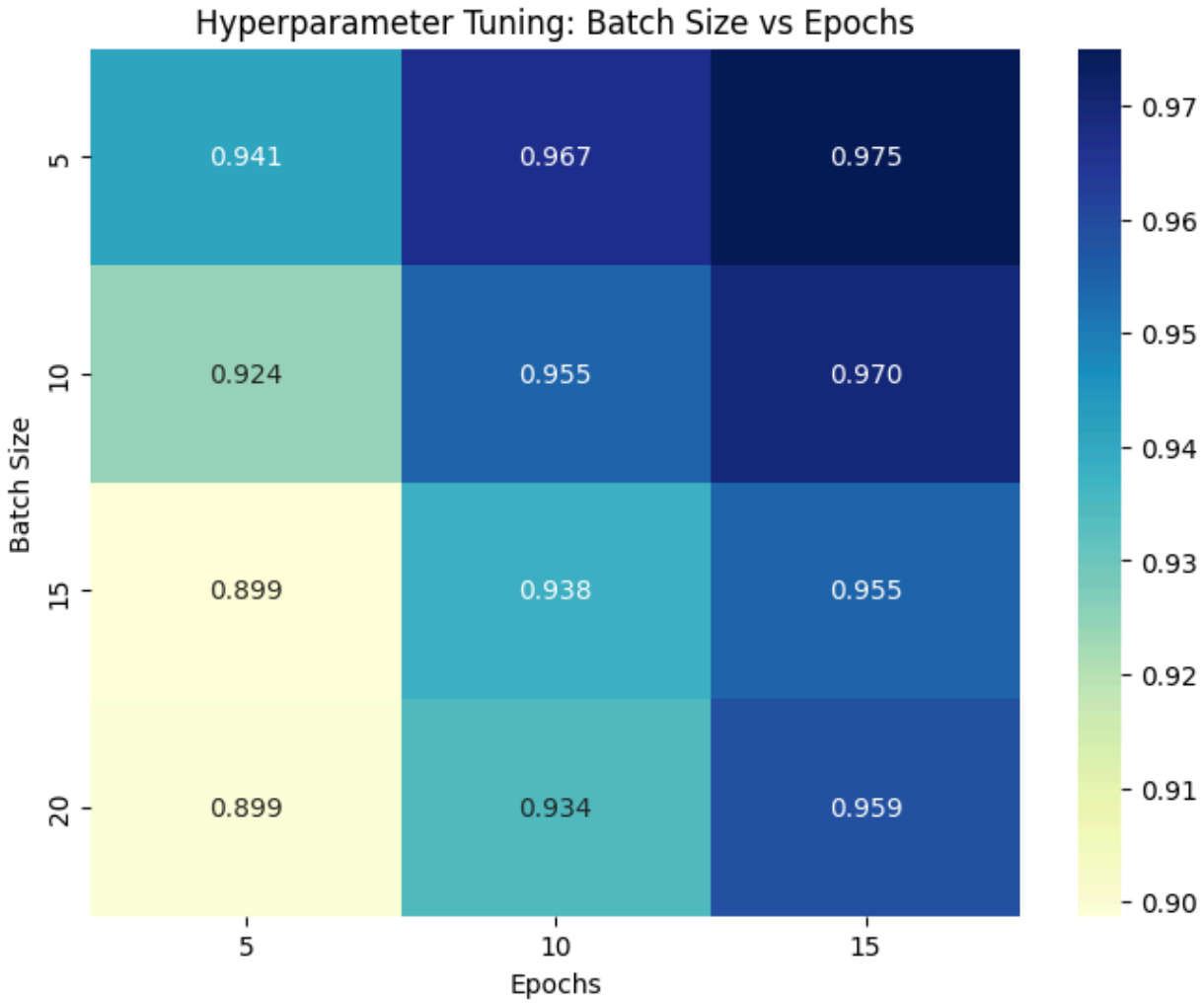
RUN NUMBER	TIME TAKEN	BEST PARAMETERS	Hybrid Accuracy
1	4m 15s	Best: 0.970116950272868 using {'batch_size': 10, 'epochs': 15}	Hybrid model accuracy: 0.9572192513368984
2	4m 5s	Best: 0.9750218938737719 using {'batch_size': 5, 'epochs': 15}	Hybrid model accuracy: 0.946524064171123
3	4m 23s	Best: 0.973683802351414 using {'batch_size': 5, 'epochs': 15}	Hybrid model accuracy: 0.9518716577540107
4	4m 0s	0.9719054471003443 using {'batch_size': 5, 'epochs': 15}	Hybrid model accuracy: 0.9518716577540107
5	4m 3s	Best: 0.970562583071442 using {'batch_size': 10, 'epochs': 15}	Hybrid model accuracy: 0.9518716577540107
6	4m 23s	Best: 0.9678840137734538 using {'batch_size': 10, 'epochs': 15}	Hybrid model accuracy: 0.9340463458110517
7	4m 13s	Best: 0.9705673555779862 using {'batch_size': 10, 'epochs': 15}	Hybrid model accuracy: 0.9322638146167558
8	4m 7s	Best: 0.9696647552777957 using {'batch_size': 5, 'epochs': 15}	Hybrid model accuracy: 0.9500891265597148
9	4m 6s	Best: 0.9696647552777957 using {'batch_size': 5, 'epochs': 15}	Hybrid model accuracy: 0.9518716577540107
10	4m 10s	Best: 0.9763581957061759 using {'batch_size': 5, 'epochs': 15}	Hybrid model accuracy: 0.9429590017825312

Heat Maps

1


Hyperparameter Tuning: Batch Size vs Epochs
Batch Size
Epochs
5
10
15
20
0.920
0.953
0.964
0.904
0.952
0.970
0.896
0.946
0.964
0.897
0.942
0.956
0.97
0.96
0.95
0.94
0.93
0.92
0.91
0.90

2


Hyperparameter Tuning: Batch Size vs Epochs
Batch Size
Epochs
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10
15
20
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0.967
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0.924
0.955
0.970
0.899
0.938
0.955
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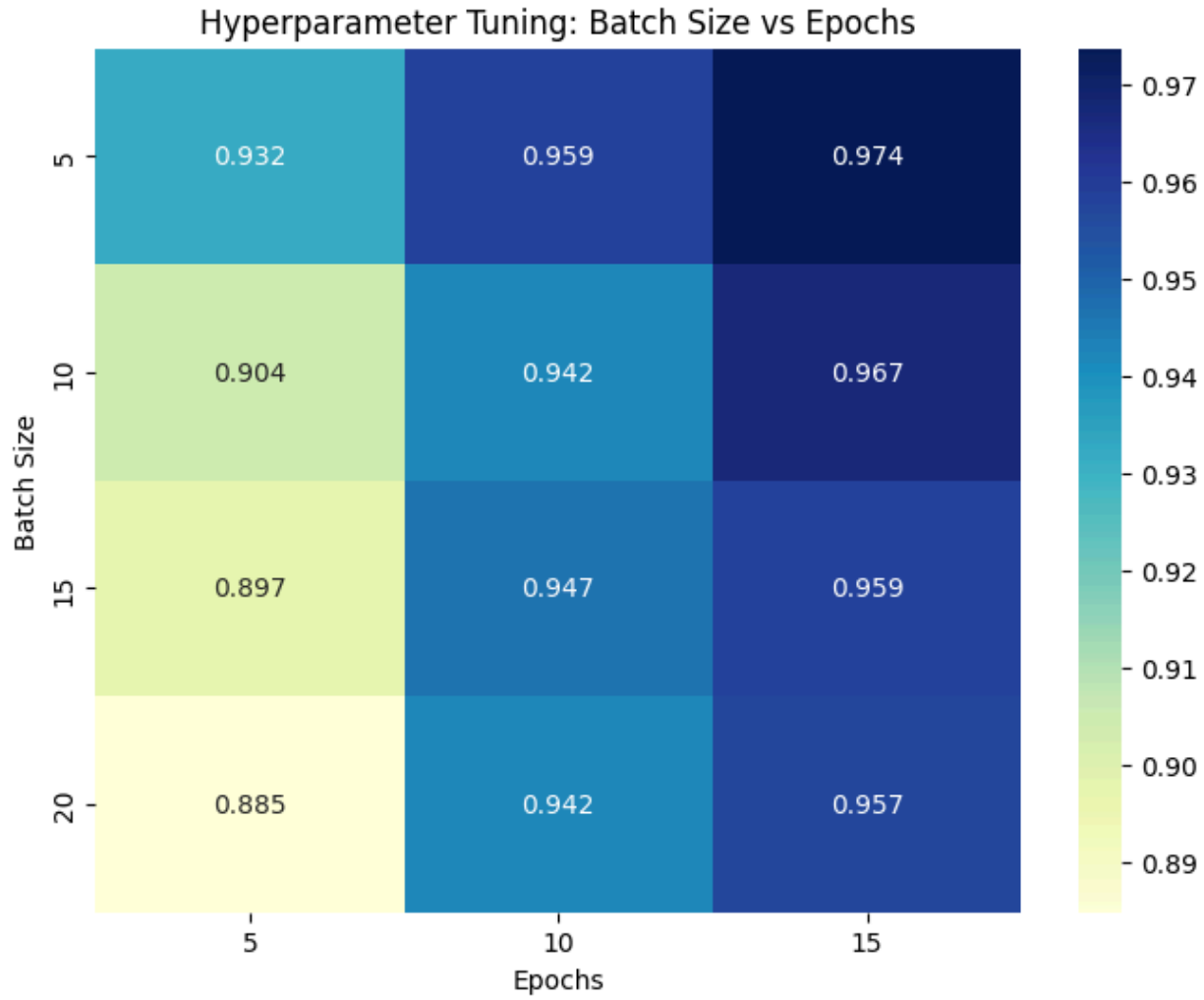
0.959
0.97
0.96
0.95
0.94
0.93
0.92
0.91
0.90

3


Hyperparameter Tuning: Batch Size vs Epochs
Batch Size
Epochs
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10
15
20
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0.959
0.974
0.904
0.942
0.967
0.897
0.947
0.959
0.885
0.942
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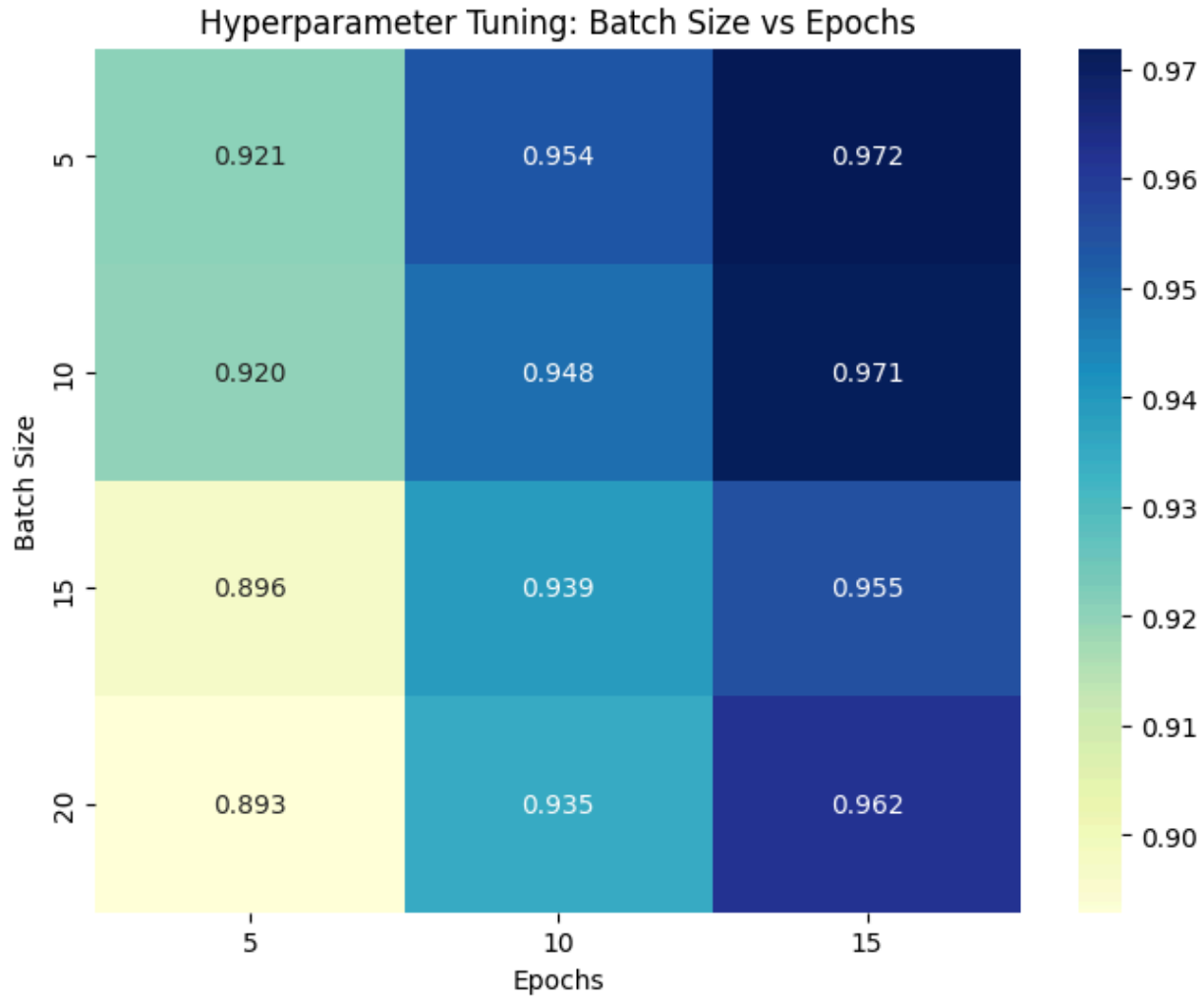
0.97
0.96
0.95
0.94
0.93
0.92
0.91
0.90
0.89

4


Hyperparameter Tuning: Batch Size vs Epochs
Batch Size
Epochs
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10
15
20
0.921
0.954
0.972
0.920
0.948
0.971
0.896
0.939
0.955
0.893
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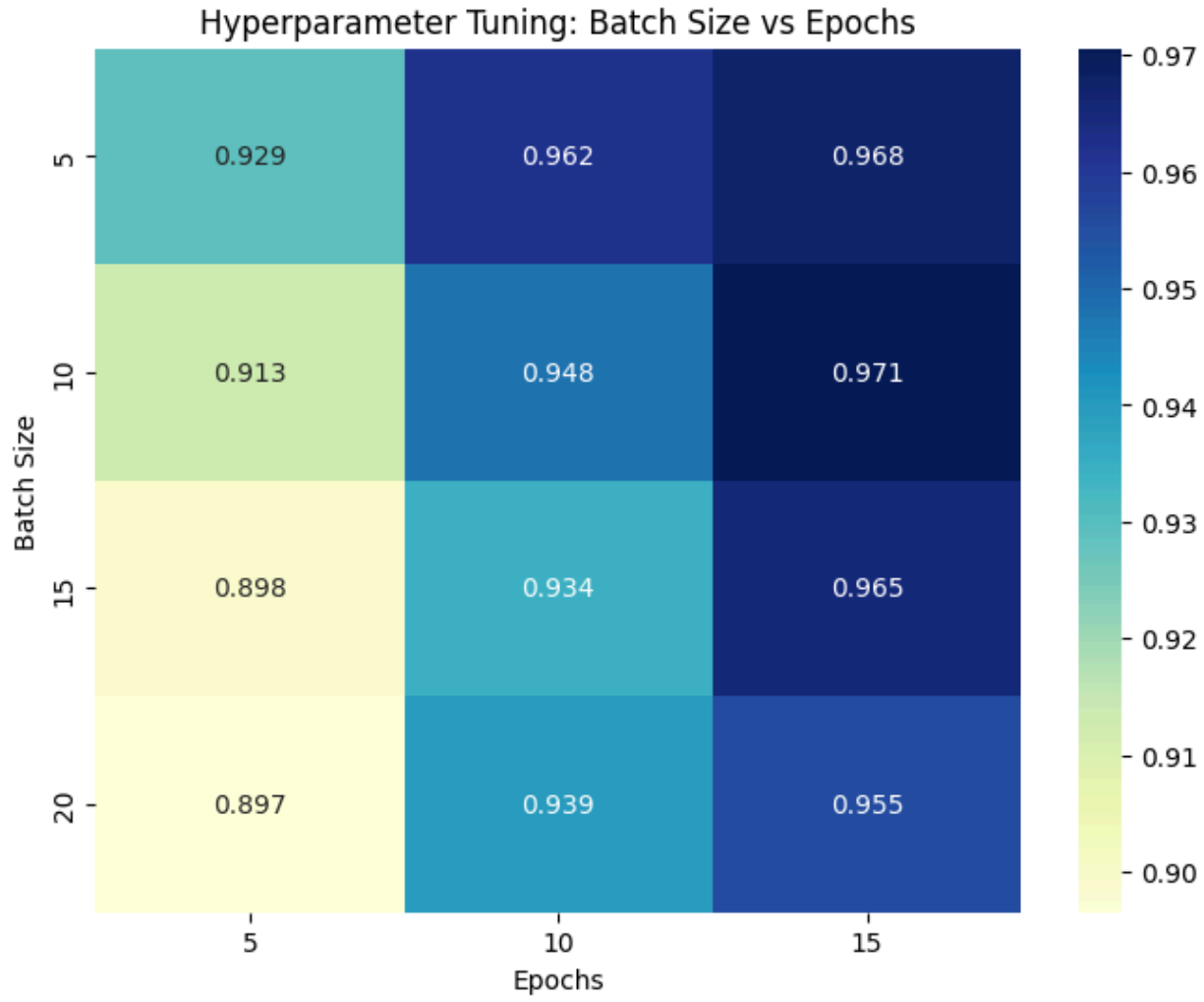
0.962
0.97
0.96
0.95
0.94
0.93
0.92
0.91
0.90

5


Hyperparameter Tuning: Batch Size vs Epochs
Batch Size
Epochs
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0.948
0.971
0.898
0.934
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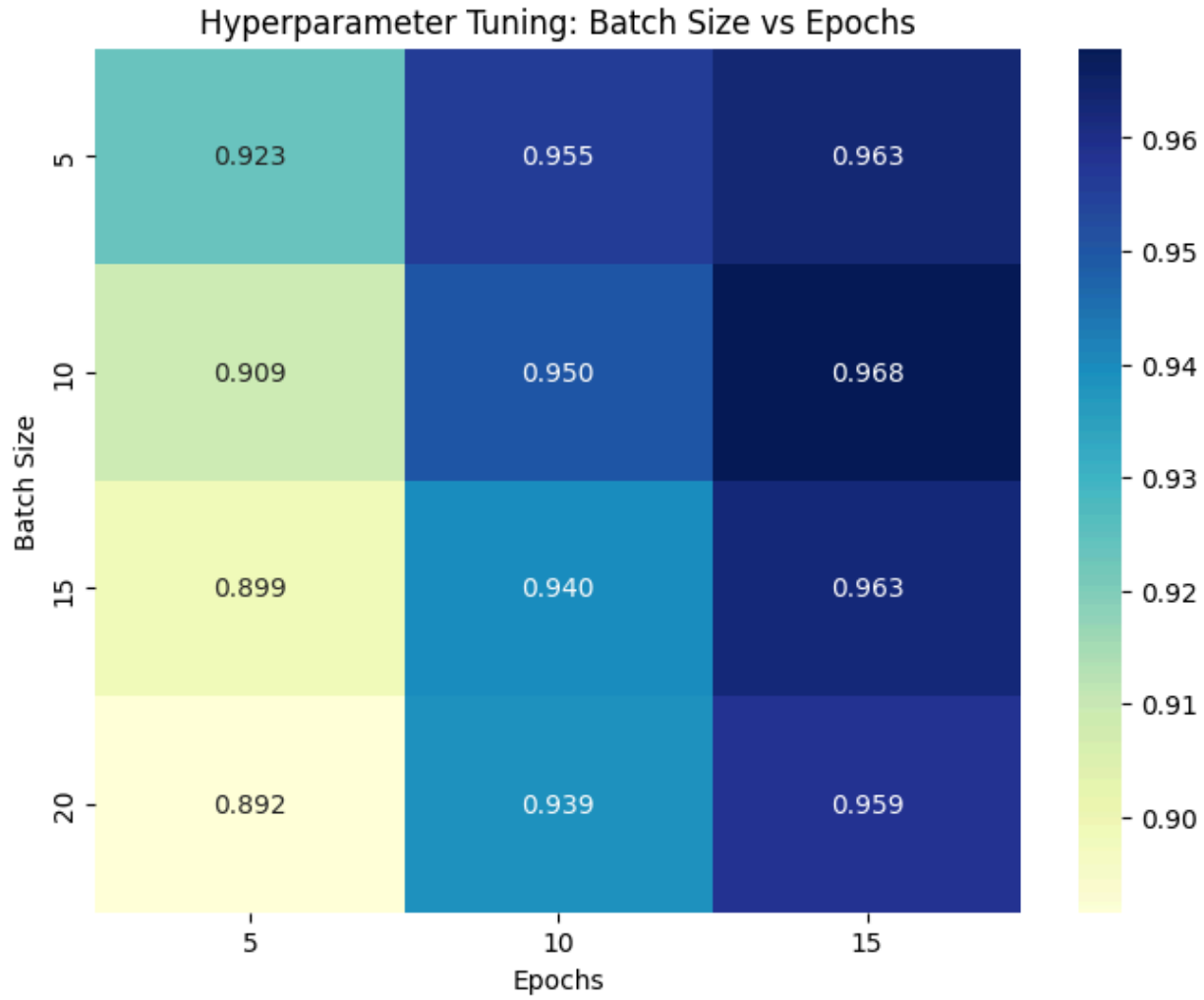
0.94
0.93
0.92
0.91
0.90


Hyperparameter Tuning: Batch Size vs Epochs
Batch Size
Epochs
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15
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0.909
0.950
0.968
0.899
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0.92
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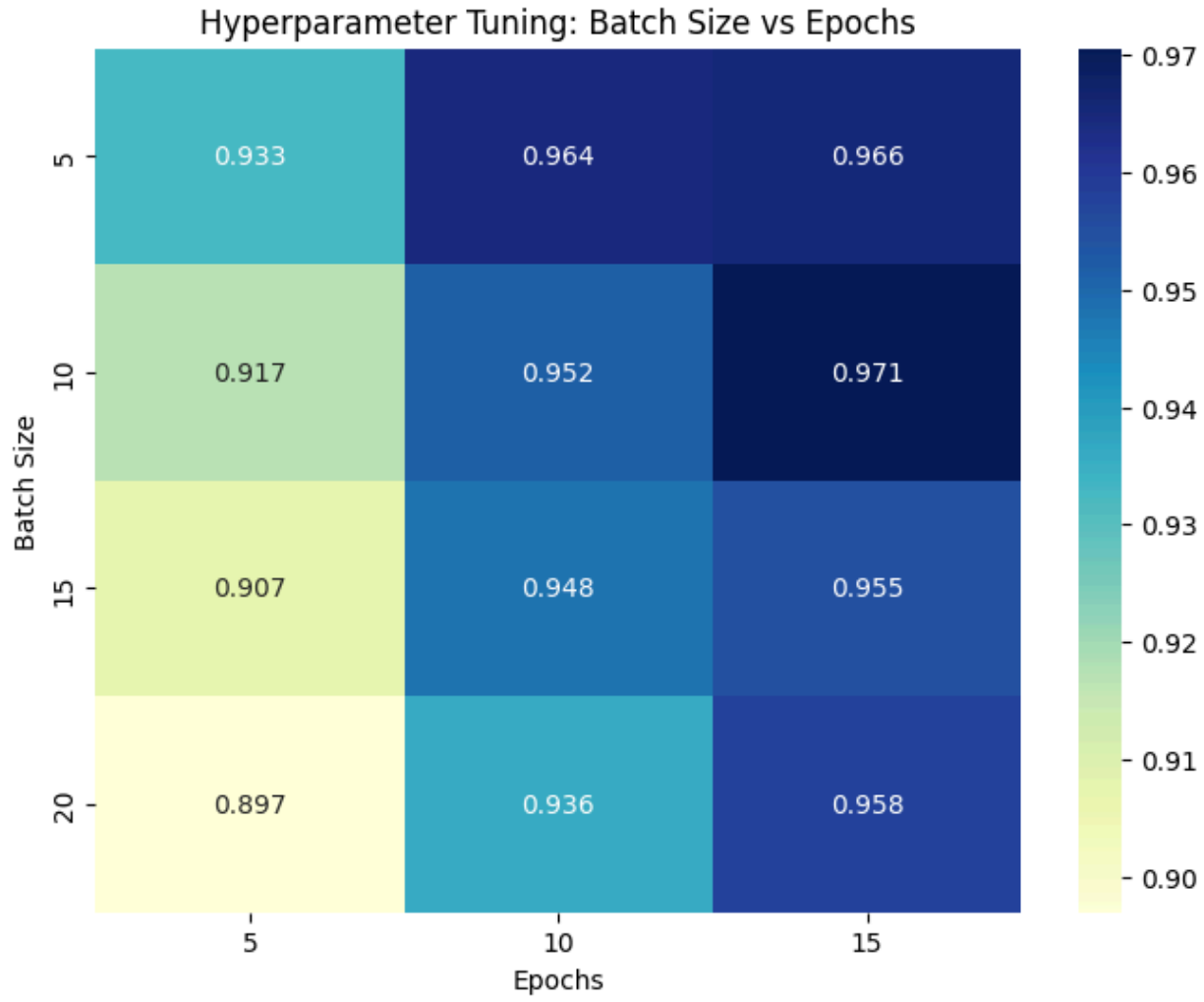
0.90


Hyperparameter Tuning: Batch Size vs Epochs
Batch Size
Epochs
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10
15
20
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0.952
0.971
0.907
0.948
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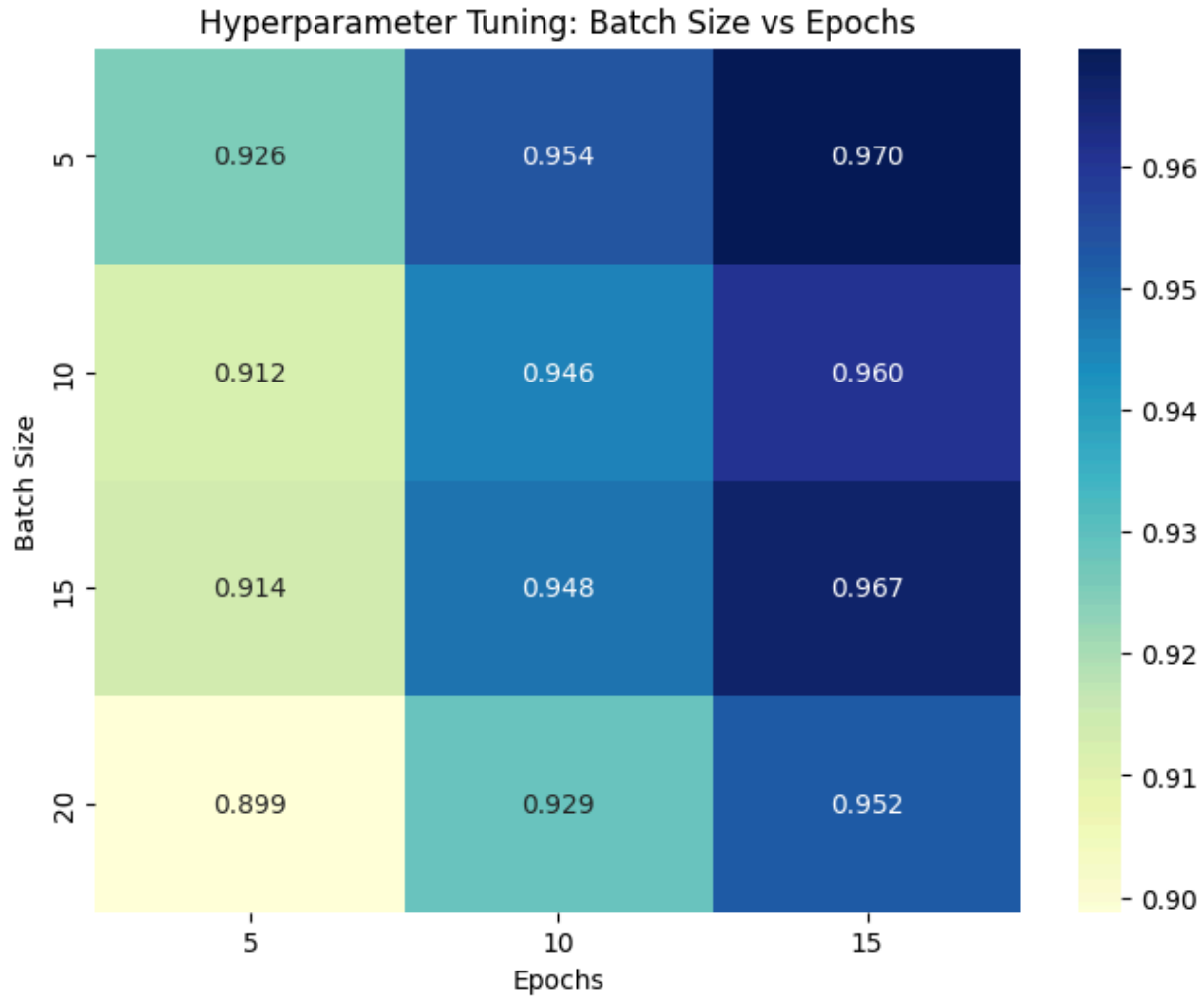
Hyperparameter Tuning: Batch Size vs Epochs
Batch Size
Epochs
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10
15
20
0.926
0.954
0.970
0.912
0.946
0.960
0.914
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0.94
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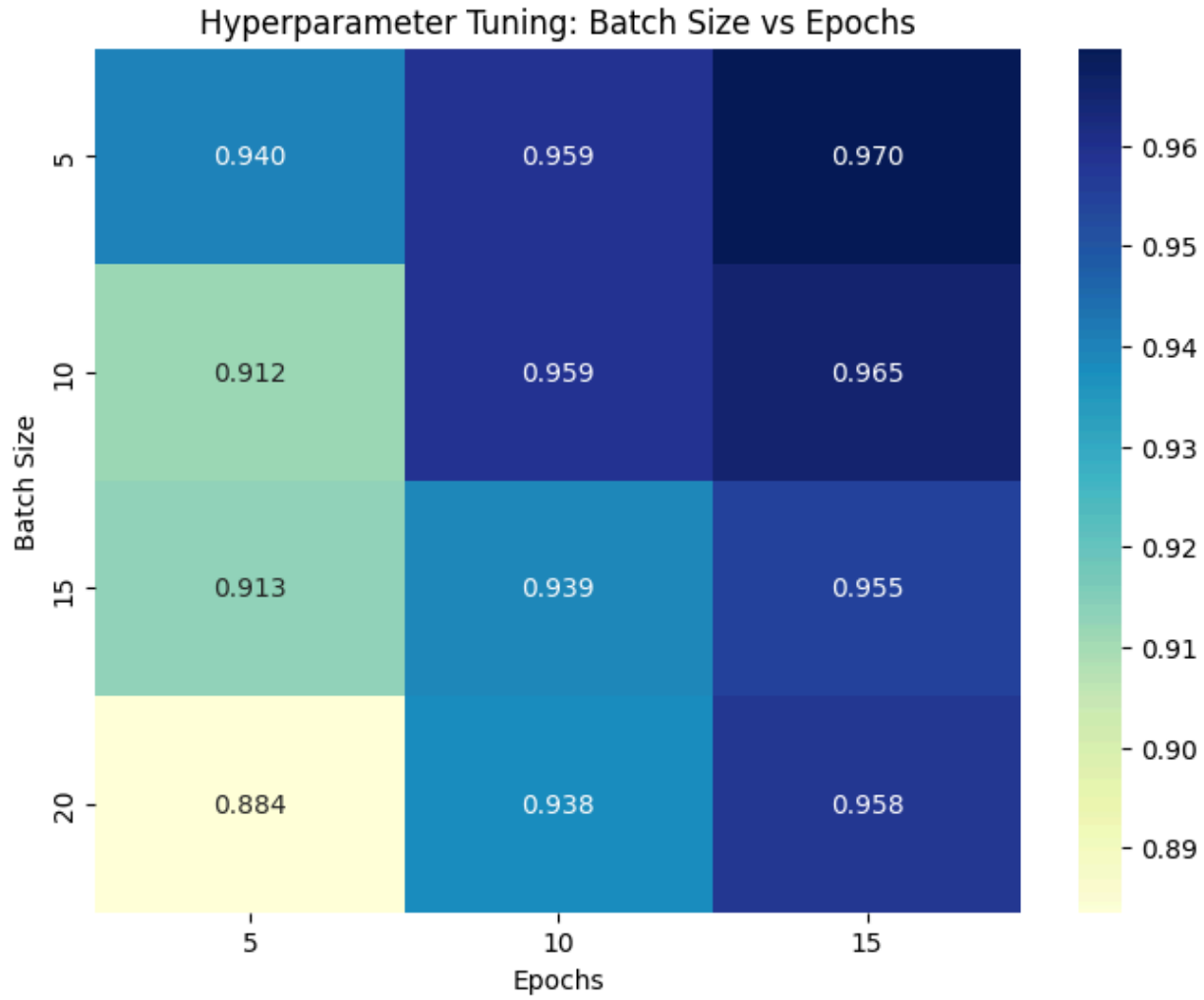
0.91
0.90


Hyperparameter Tuning: Batch Size vs Epochs
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0.959
0.970
0.912
0.959
0.965
0.913
0.939
0.955
0.884
0.938
0.958
Batch Size
5
10
15
20
Epochs
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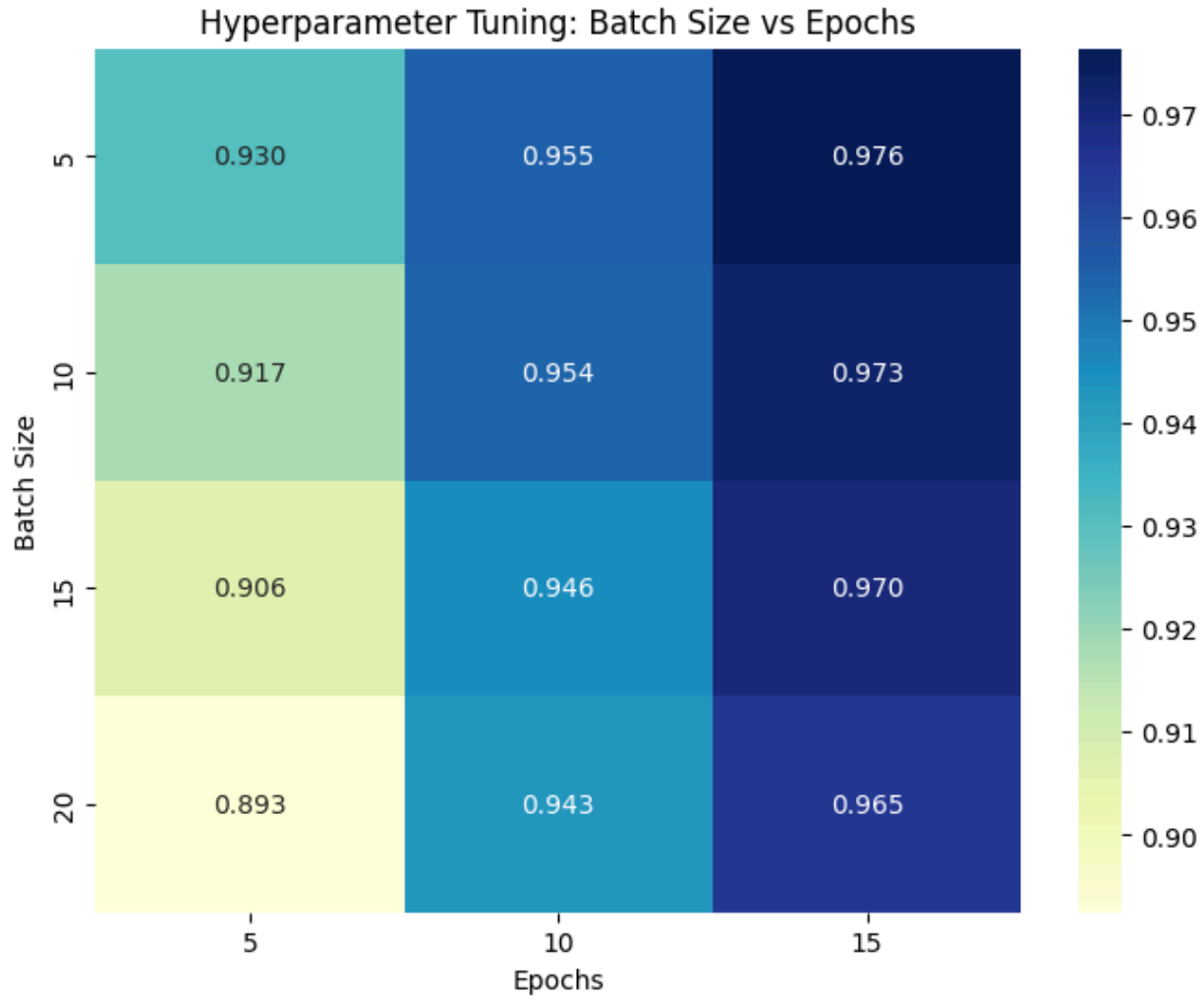
10
15
0.96
0.95
0.94
0.93
0.92
0.91
0.90
0.89

10


Hyperparameter Tuning: Batch Size vs Epochs
Batch Size
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10
15
20
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0.917
0.954
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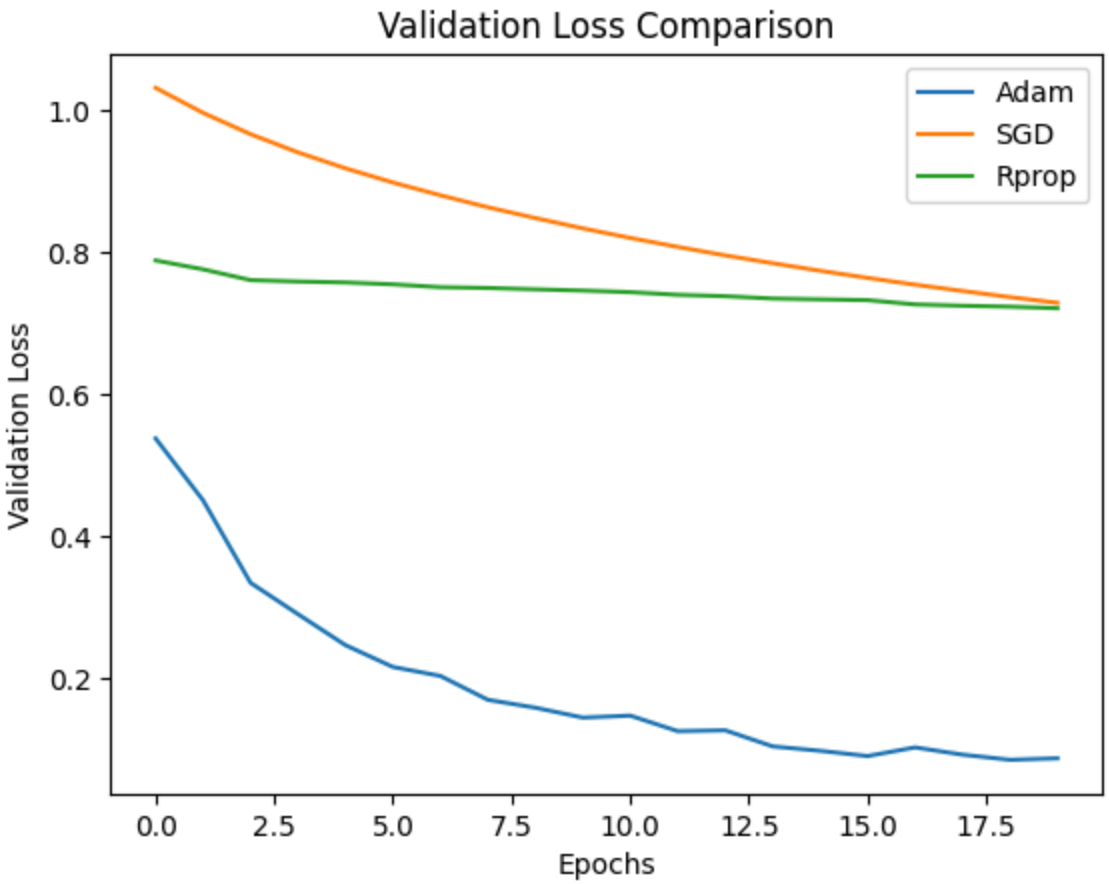
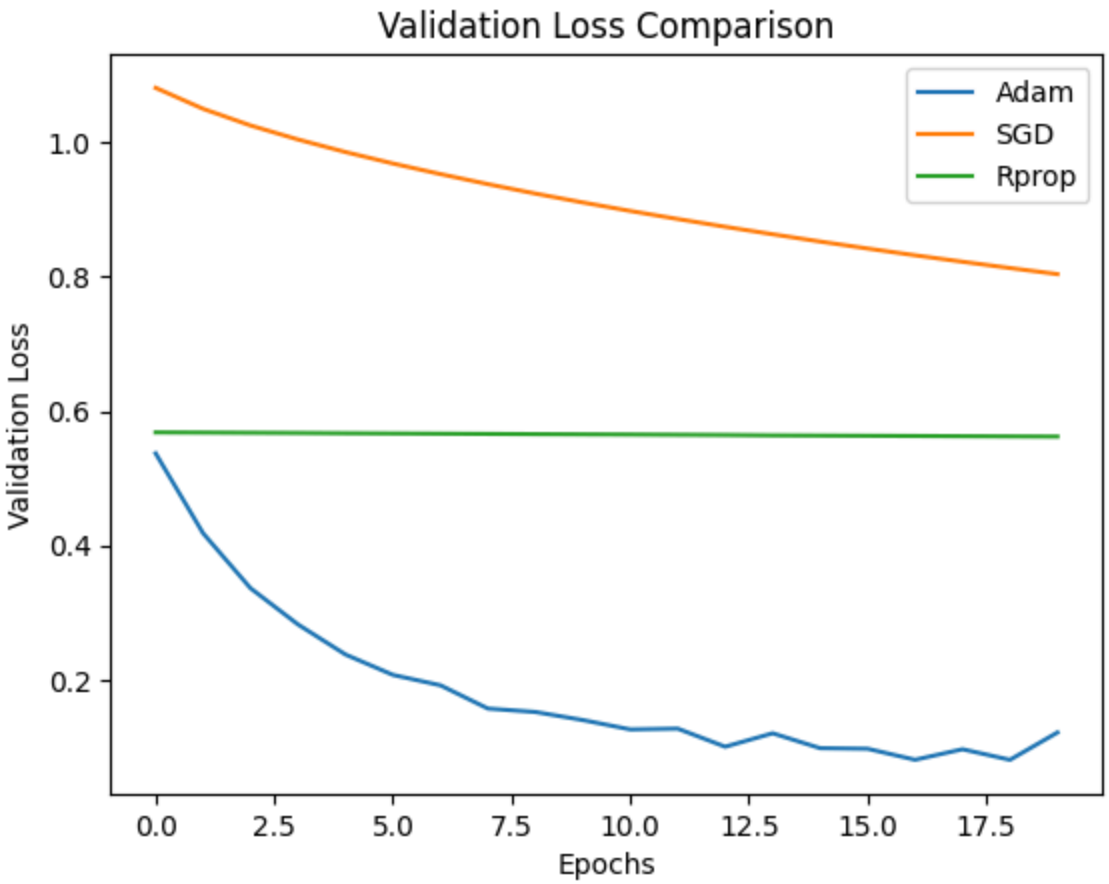
0.906
0.946
0.970
0.893
0.943
0.965
Epochs
5
10
15
0.97
0.96
0.95
0.94
0.93
0.92
0.91
0.90

Graphs
1


Validation Loss Comparison
Adam
SGD
Rprop
Validation Loss
1.0
0.8
0.6
0.4
0.2
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
Epochs

2


Validation Loss Comparison
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SGD
Rprop
Validation Loss
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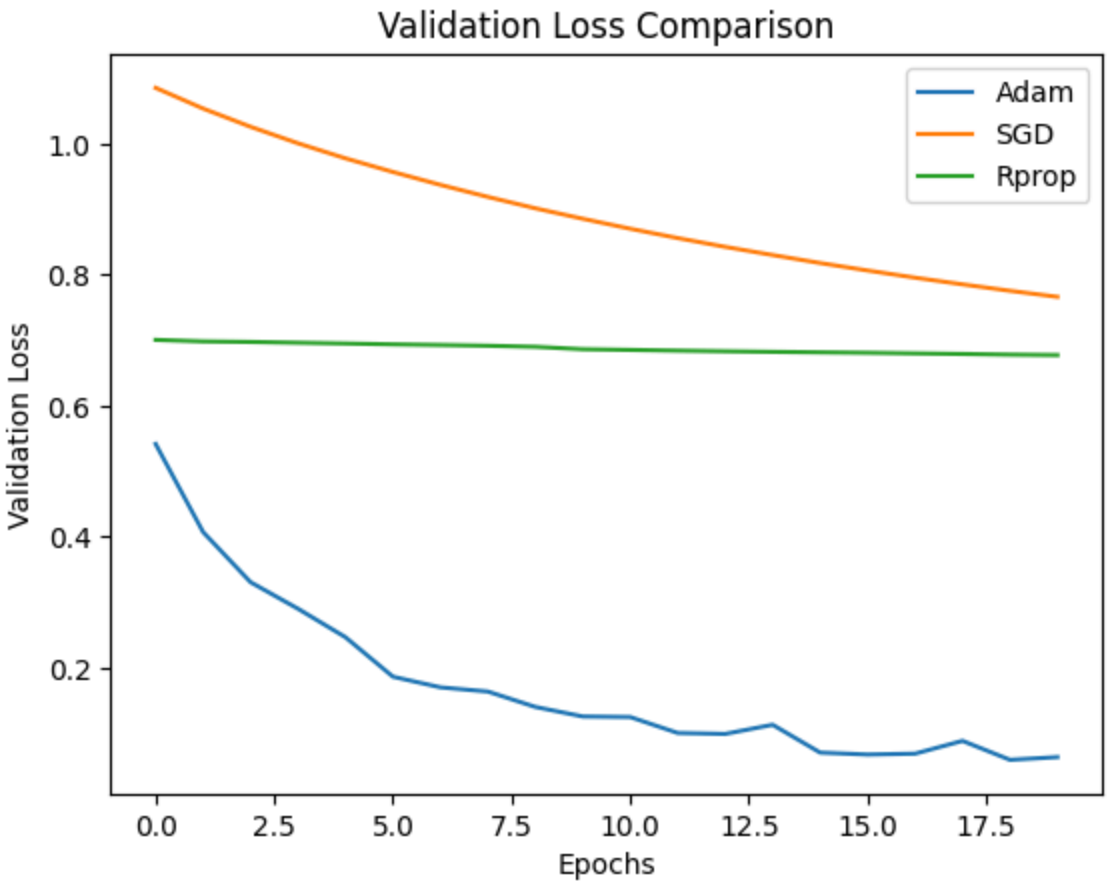
5.0
7.5
10.0
12.5
15.0
17.5
Epochs

3


Validation Loss Comparison
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SGD
Rprop
Validation Loss
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5.0
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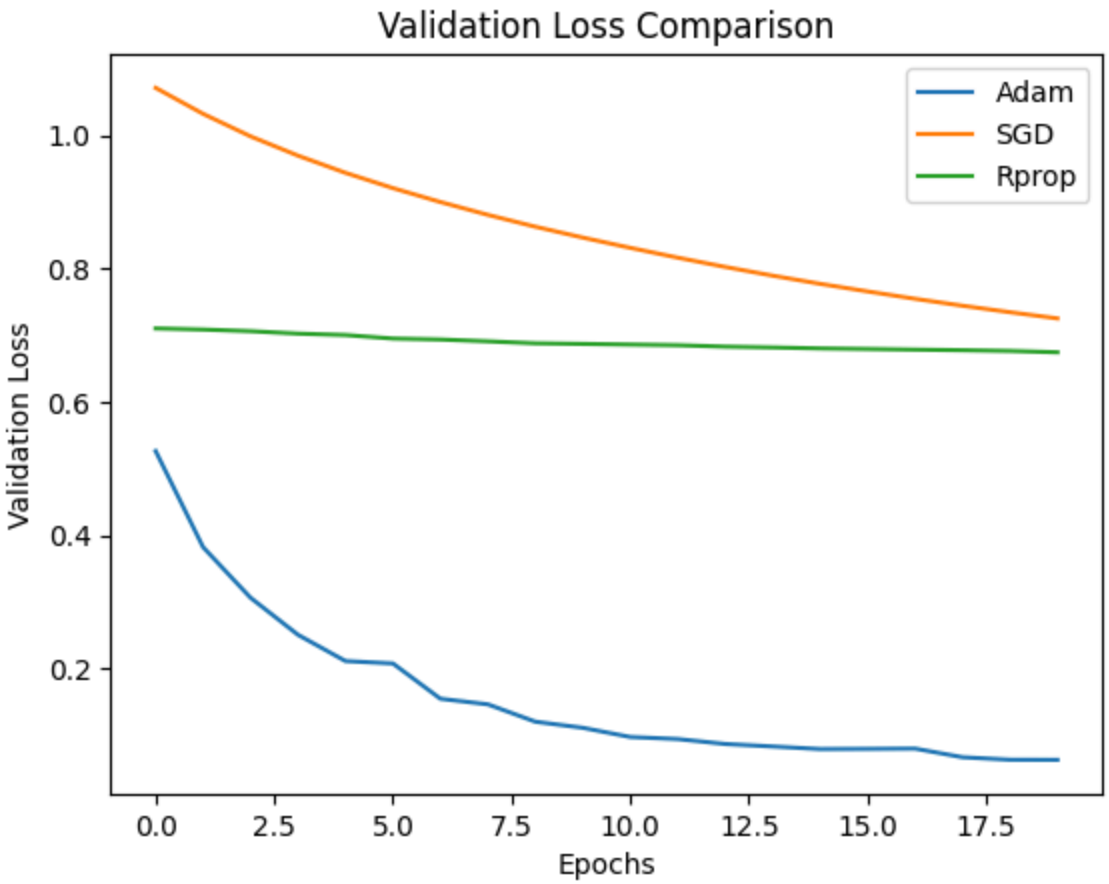
12.5
15.0
17.5
Epochs

4


Validation Loss Comparison
Adam
SGD
Rprop
Validation Loss
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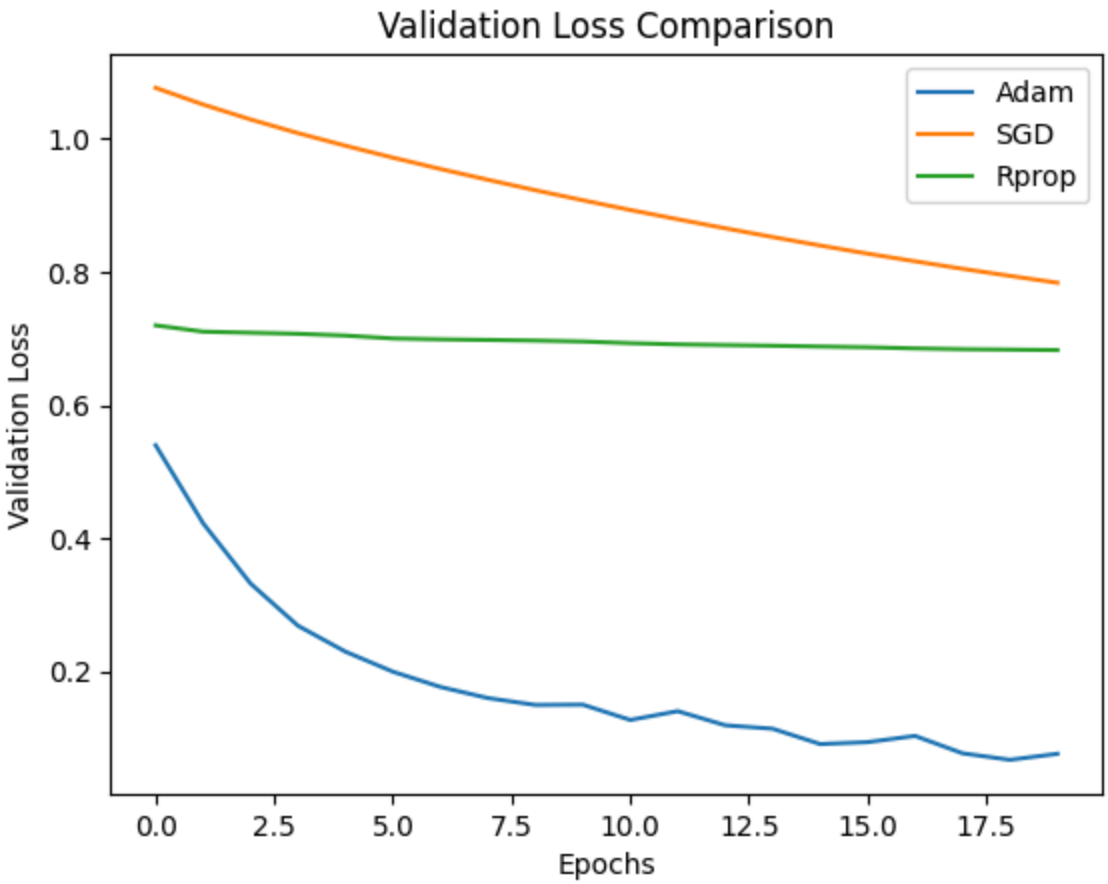
12.5
15.0
17.5
Epochs

5


Validation Loss Comparison
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SGD
Rprop
Validation Loss
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10.0
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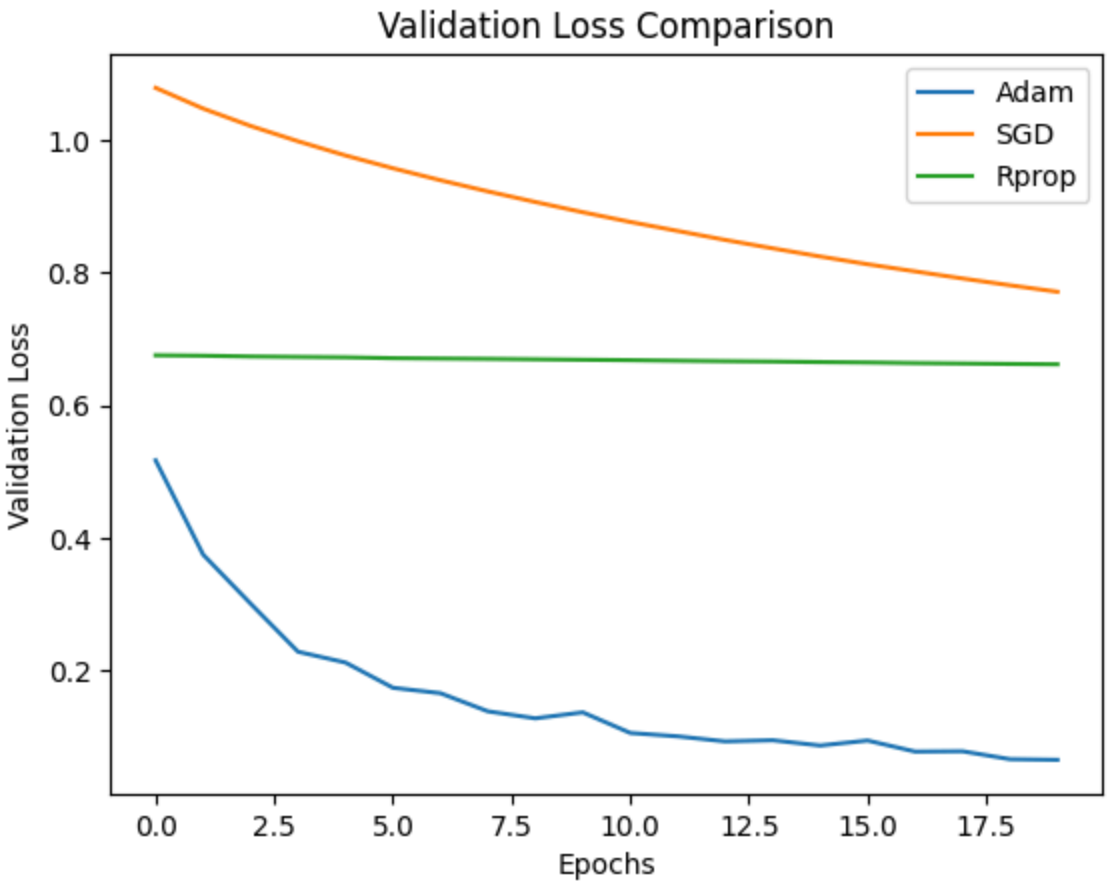
Epochs


Validation Loss Comparison
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Rprop
Validation Loss
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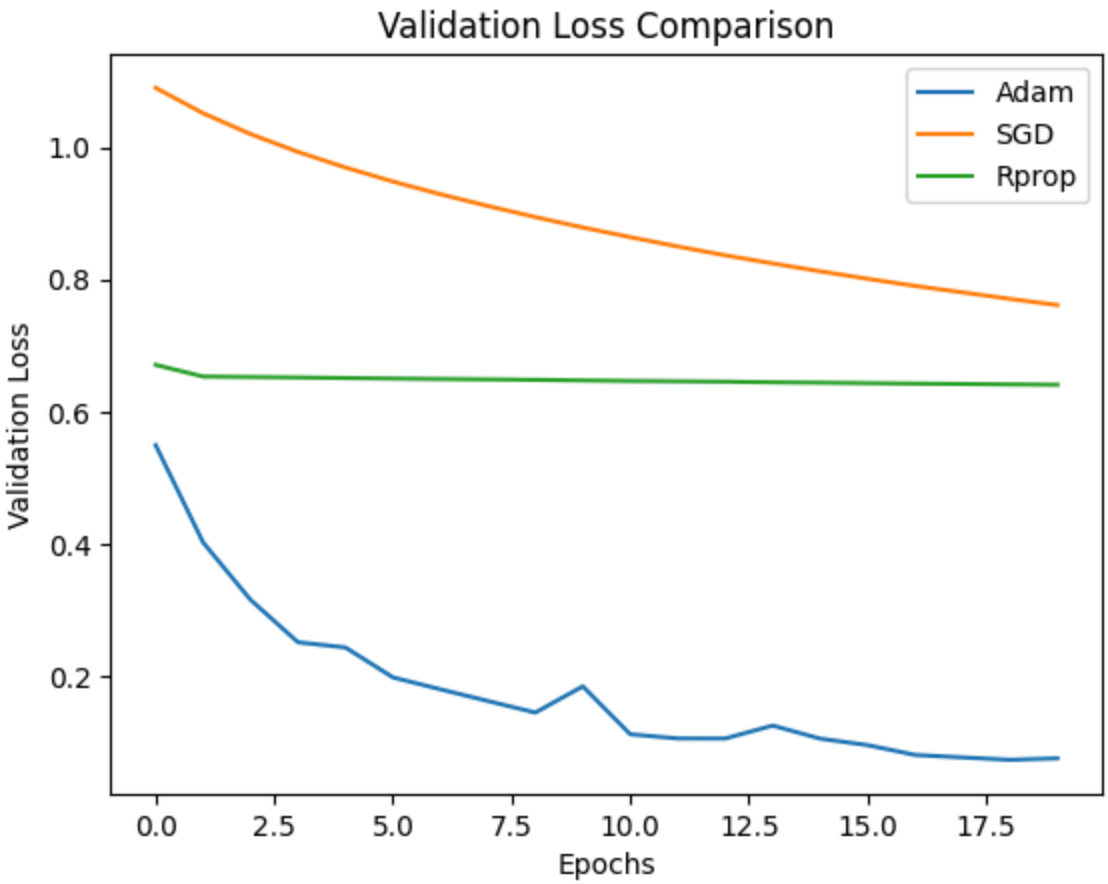
Epochs


Validation Loss Comparison
Adam
SGD
Rprop
Validation Loss
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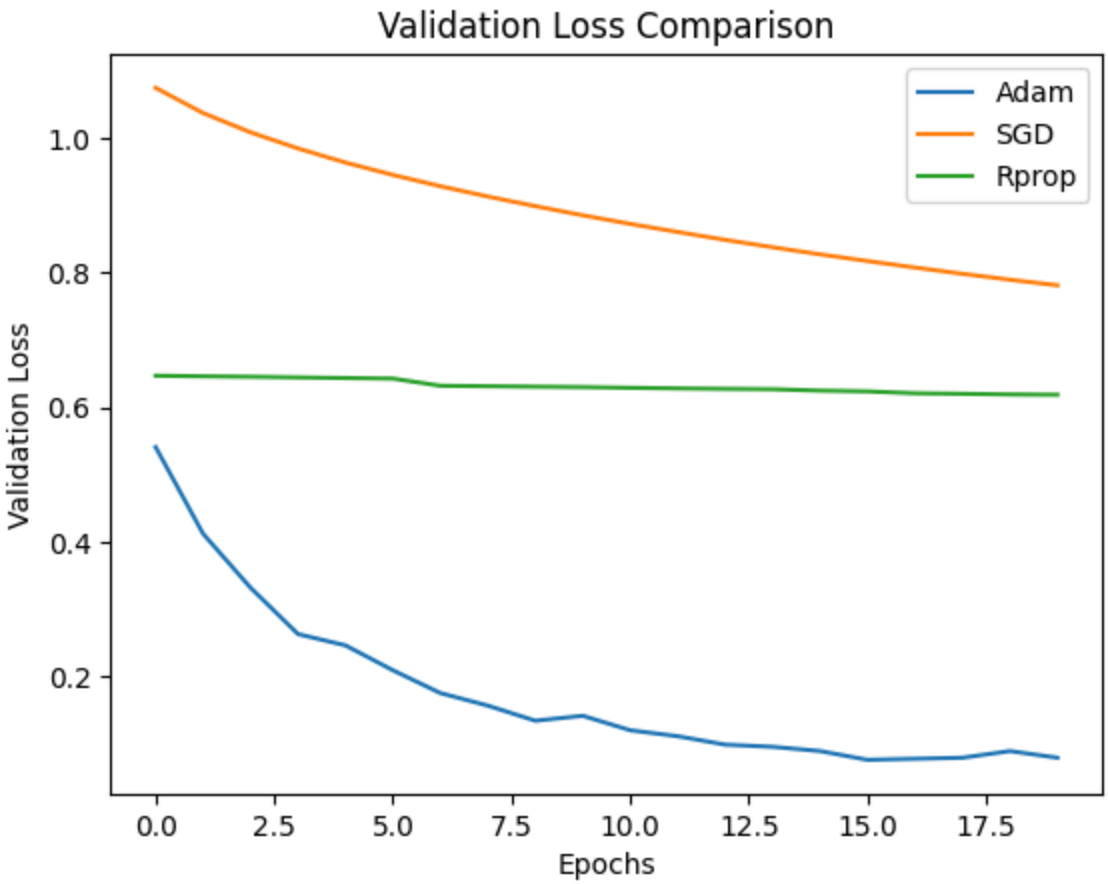
Epochs


Validation Loss Comparison
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SGD
Rprop
Validation Loss
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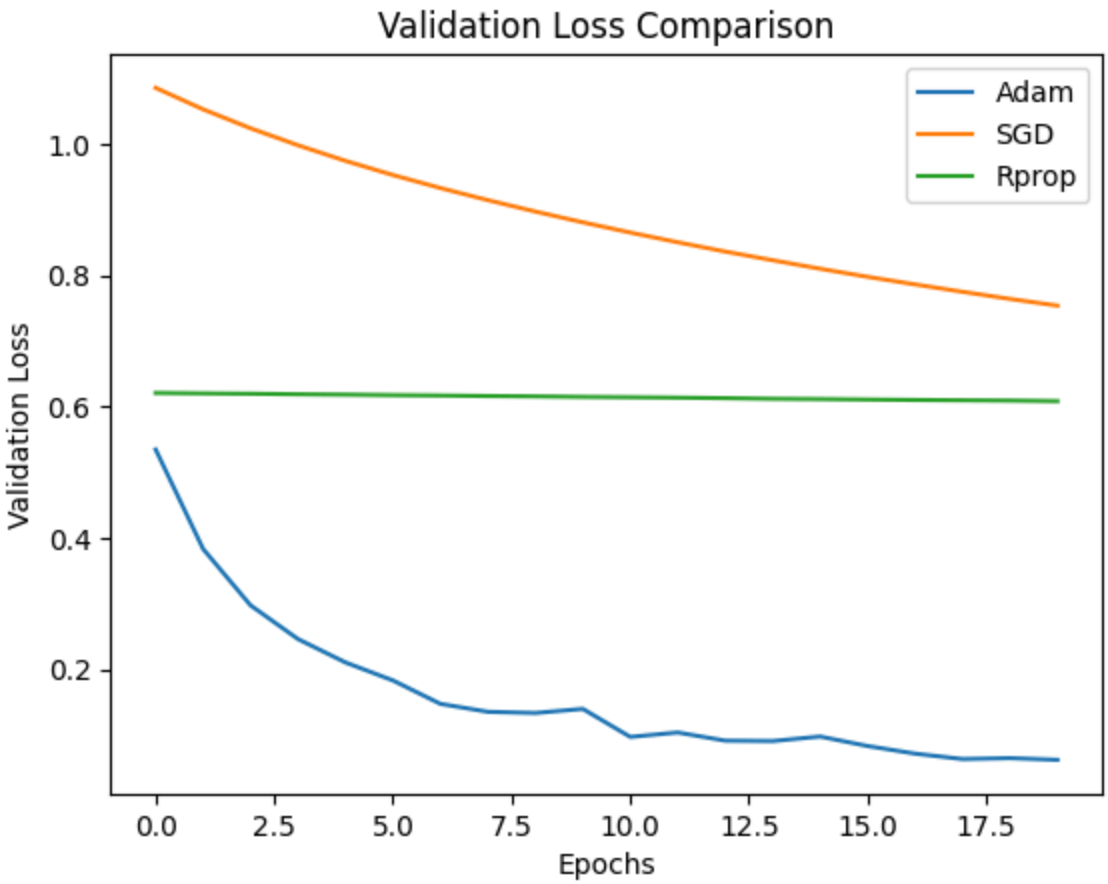
Epochs


Validation Loss Comparison
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SGD
Rprop
Validation Loss
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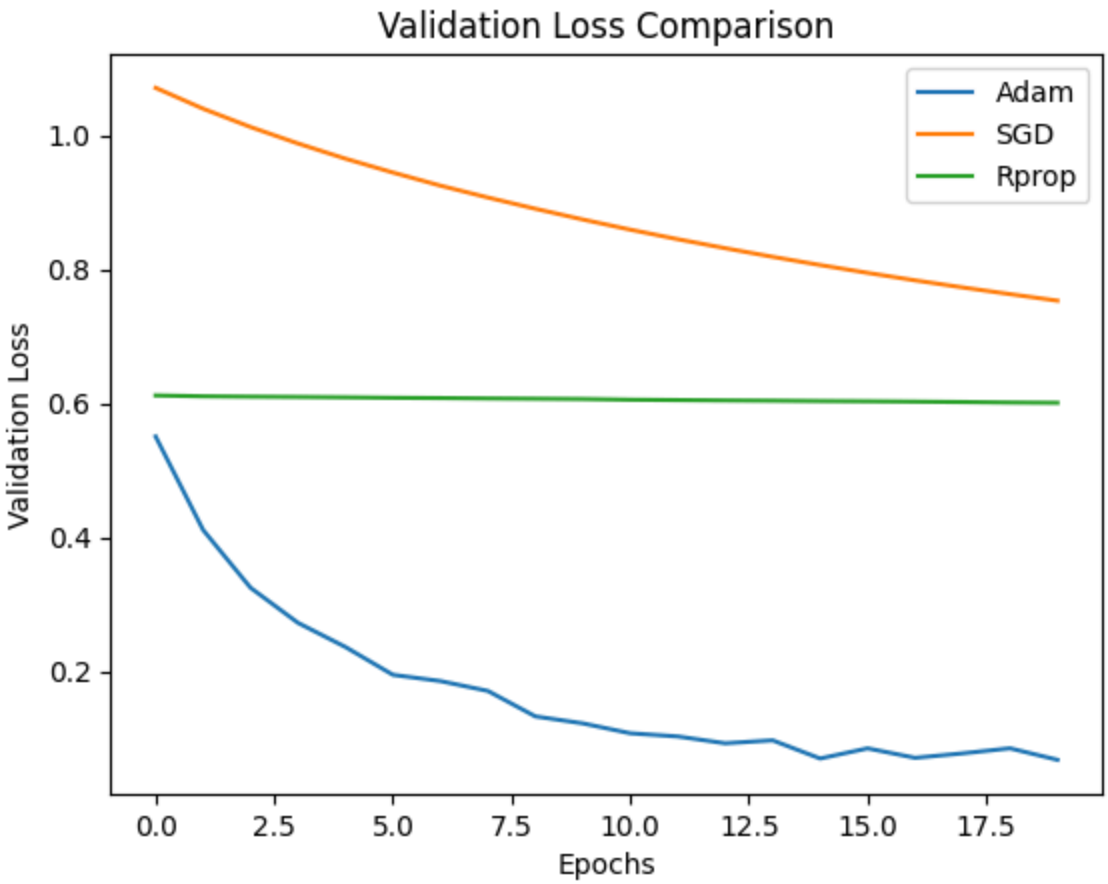
Epochs


Validation Loss Comparison
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SGD
Rprop
Validation Loss
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0.6
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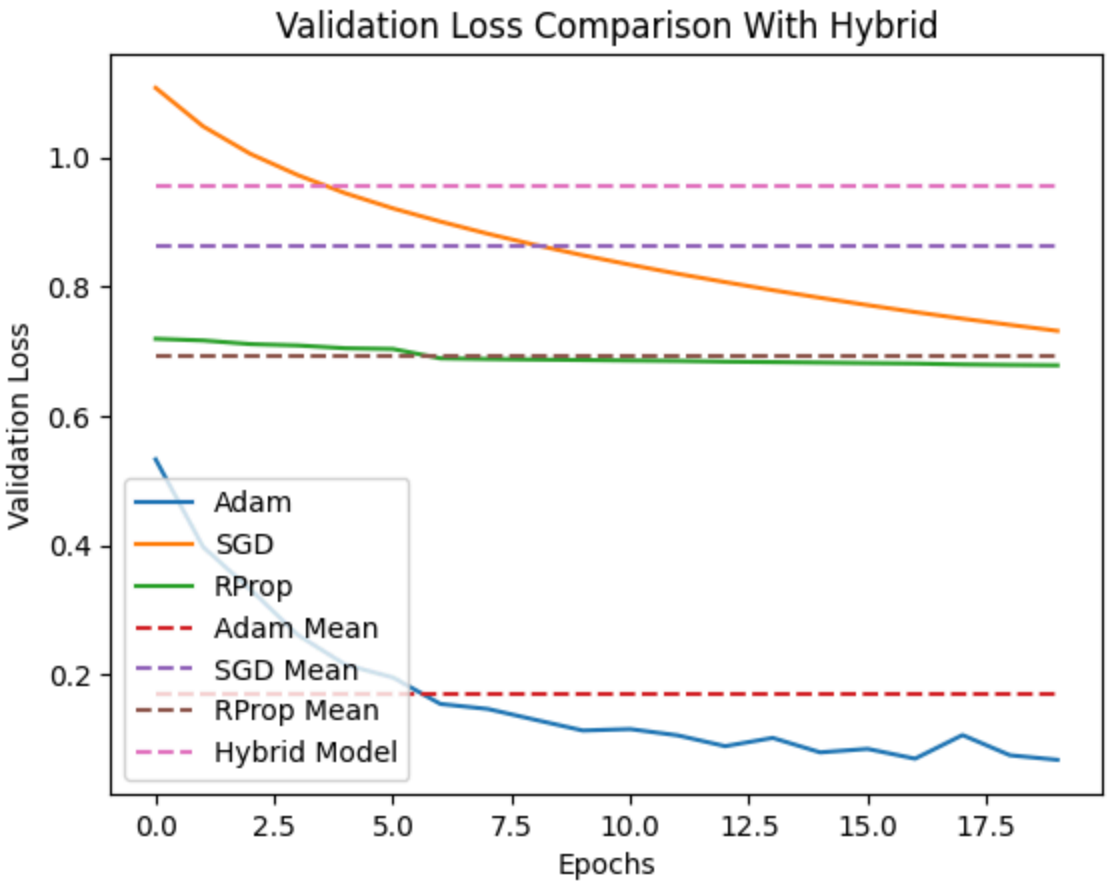
5.0
7.5
10.0
12.5
15.0
17.5
Epochs

Hybrid
1


Validation Loss Comparison With Hybrid
Validation Loss
Epochs
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0.6
0.4
0.2
0.0
2.5
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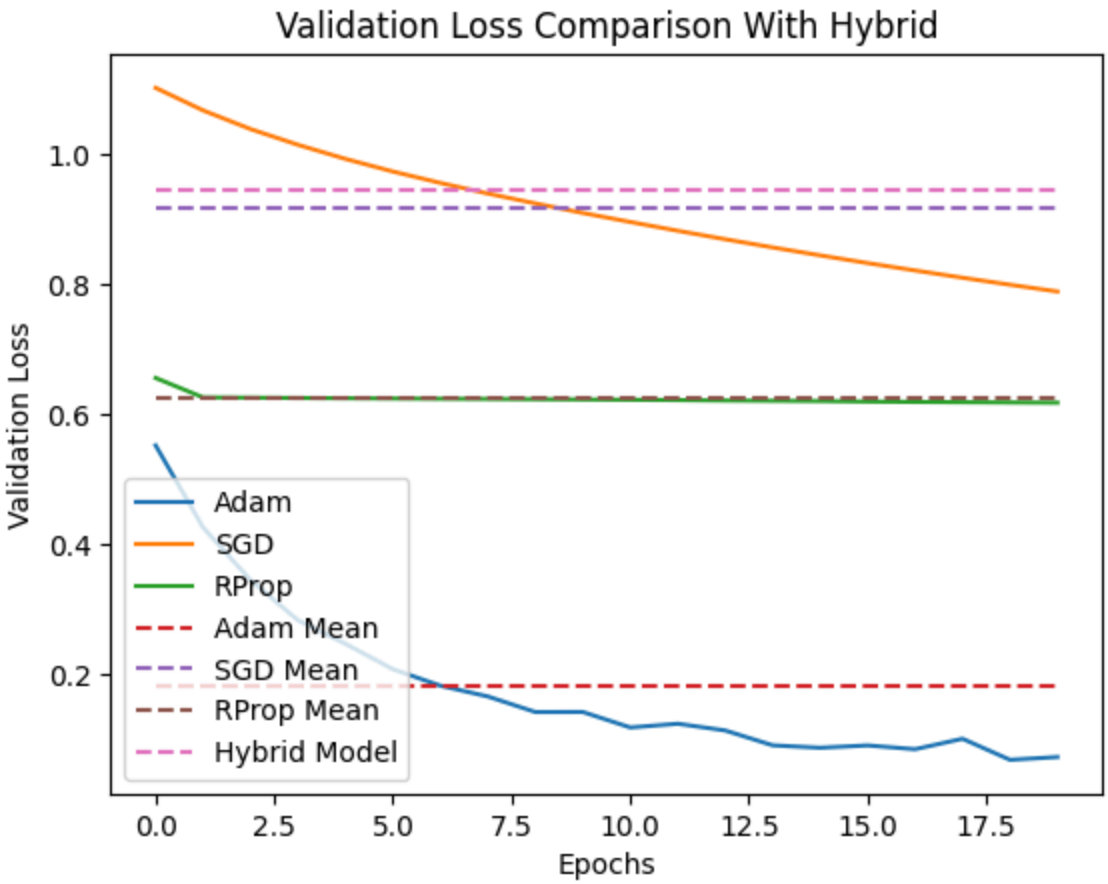
10.0
12.5
15.0
17.5
Adam
SGD
RProp
Adam Mean
SGD Mean
RProp Mean
Hybrid Model


Validation Loss Comparison With Hybrid
Validation Loss
Epochs
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0.4
0.2
0.0
2.5
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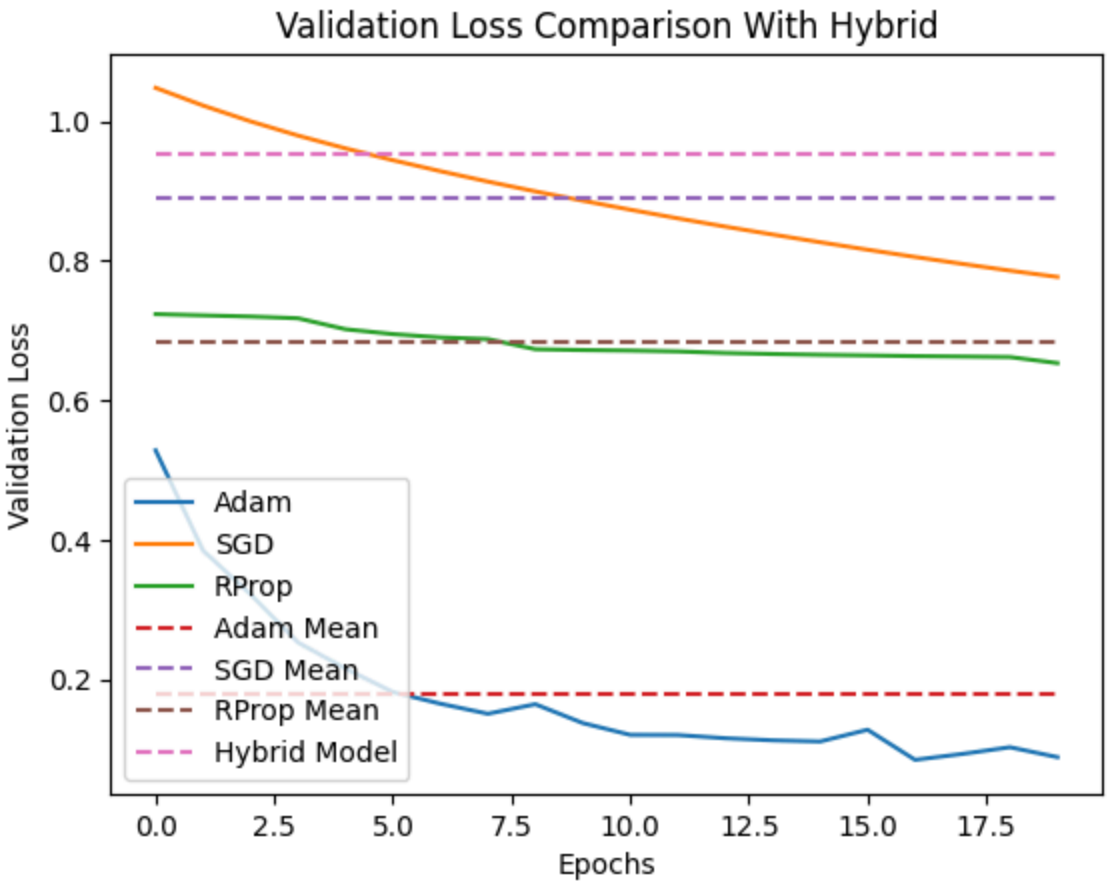
12.5
15.0
17.5
Adam
SGD
RProp
Adam Mean
SGD Mean
RProp Mean
Hybrid Model


Validation Loss Comparison With Hybrid
Validation Loss
Epochs
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0.4
0.2
0.0
2.5
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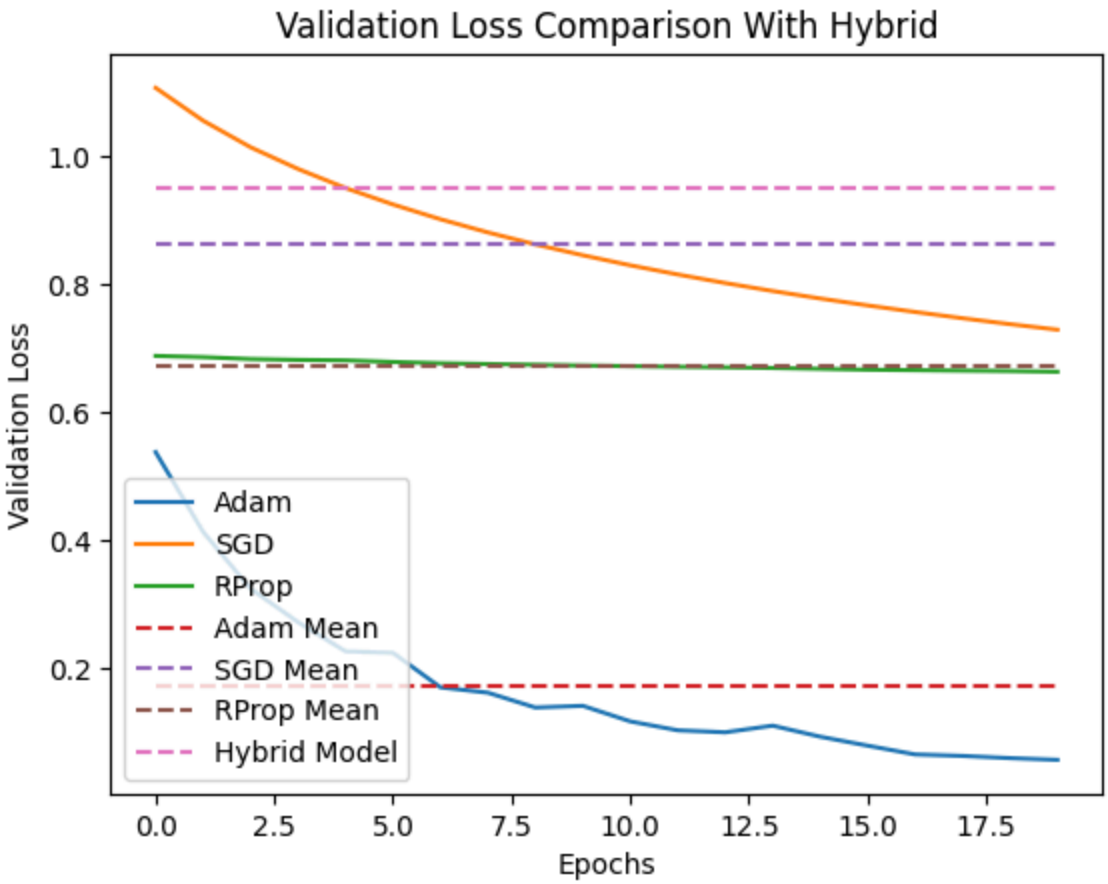
12.5
15.0
17.5
Adam
SGD
RProp
Adam Mean
SGD Mean
RProp Mean
Hybrid Model

4


Validation Loss Comparison With Hybrid
Validation Loss
Epochs
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0.6
0.4
0.2
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2.5
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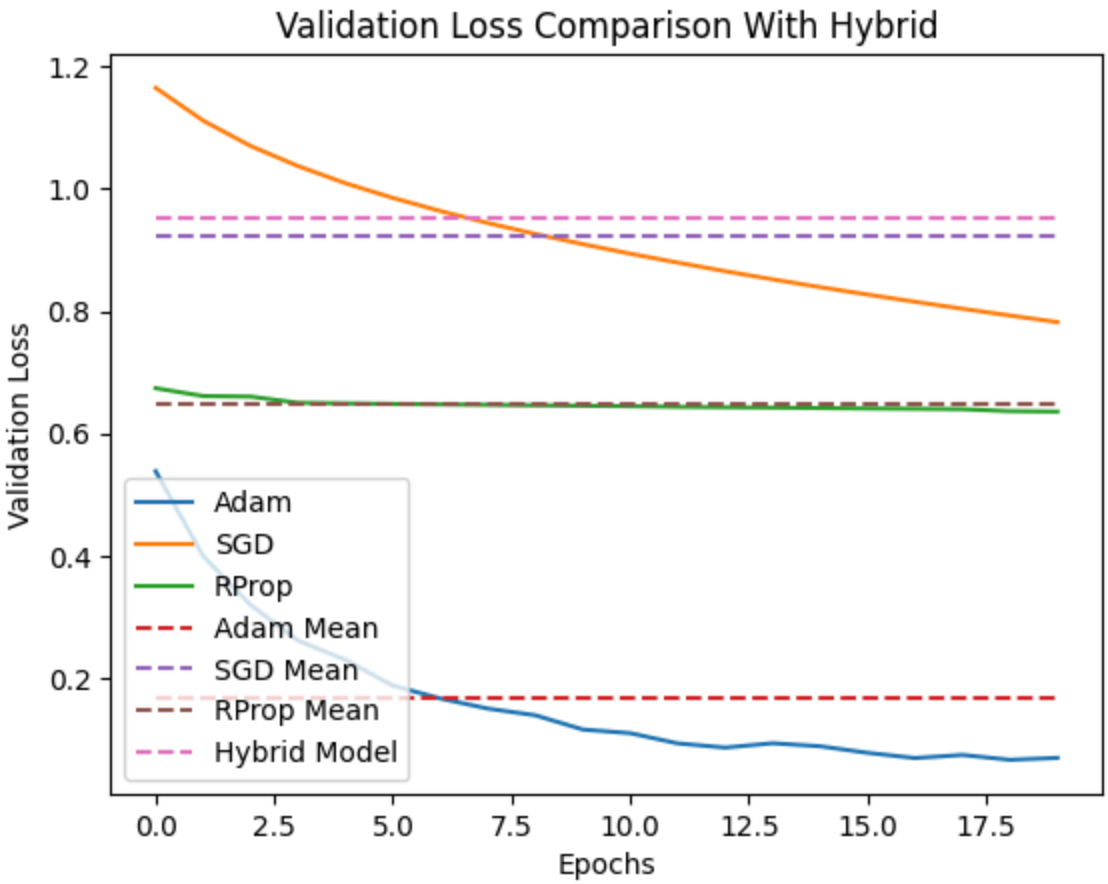
12.5
15.0
17.5
Adam
SGD
RProp
Adam Mean
SGD Mean
RProp Mean
Hybrid Model

5


Validation Loss Comparison With Hybrid
Validation Loss
Epochs
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0.4
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2.5
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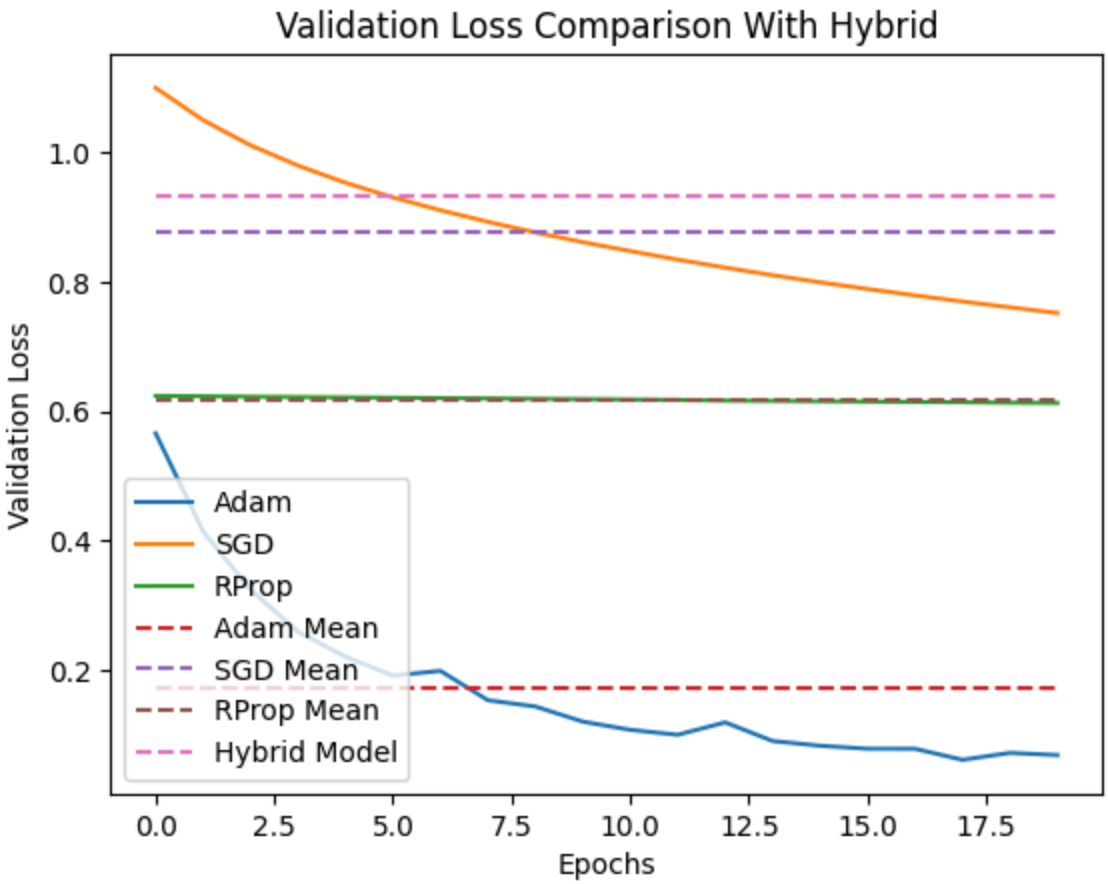
17.5
Adam
SGD
RProp
Adam Mean
SGD Mean
RProp Mean
Hybrid Model


Validation Loss Comparison With Hybrid
Validation Loss
Epochs
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0.4
0.2
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2.5
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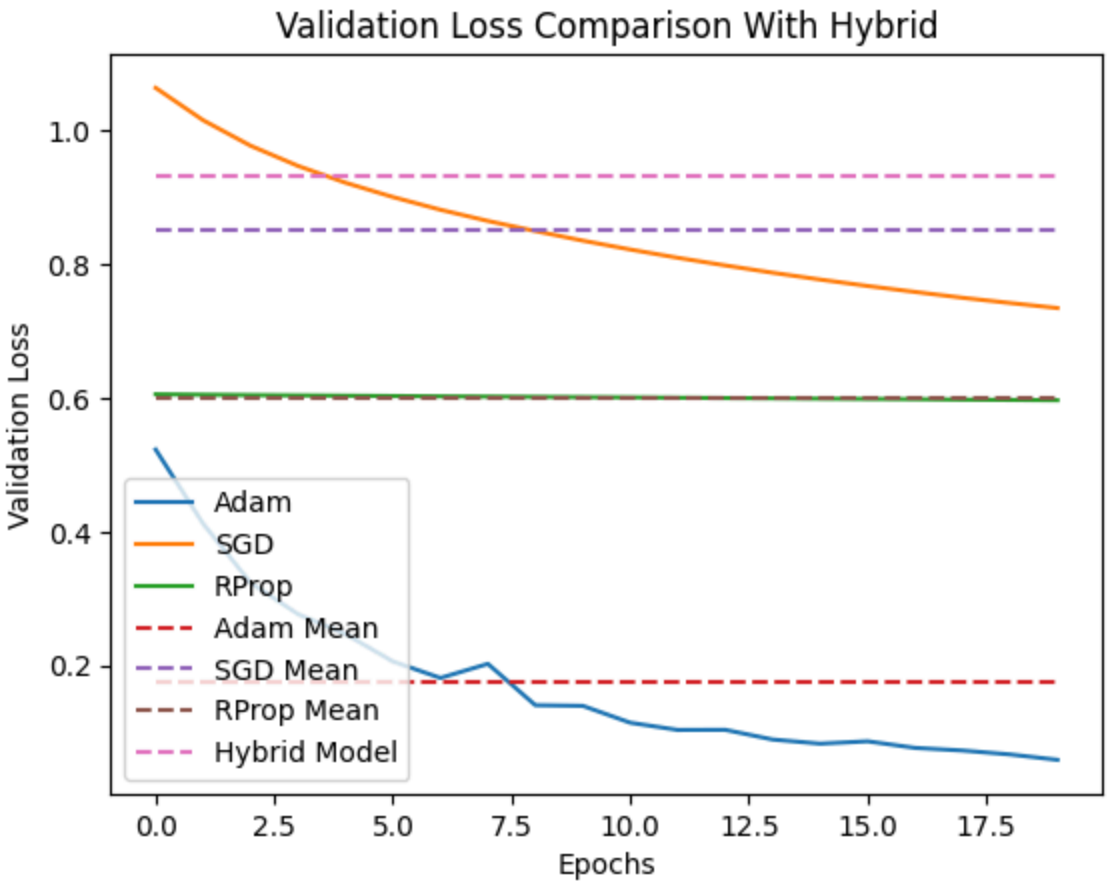
15.0
17.5
Adam
SGD
RProp
Adam Mean
SGD Mean
RProp Mean
Hybrid Model

7


Validation Loss Comparison With Hybrid
Validation Loss
Epochs
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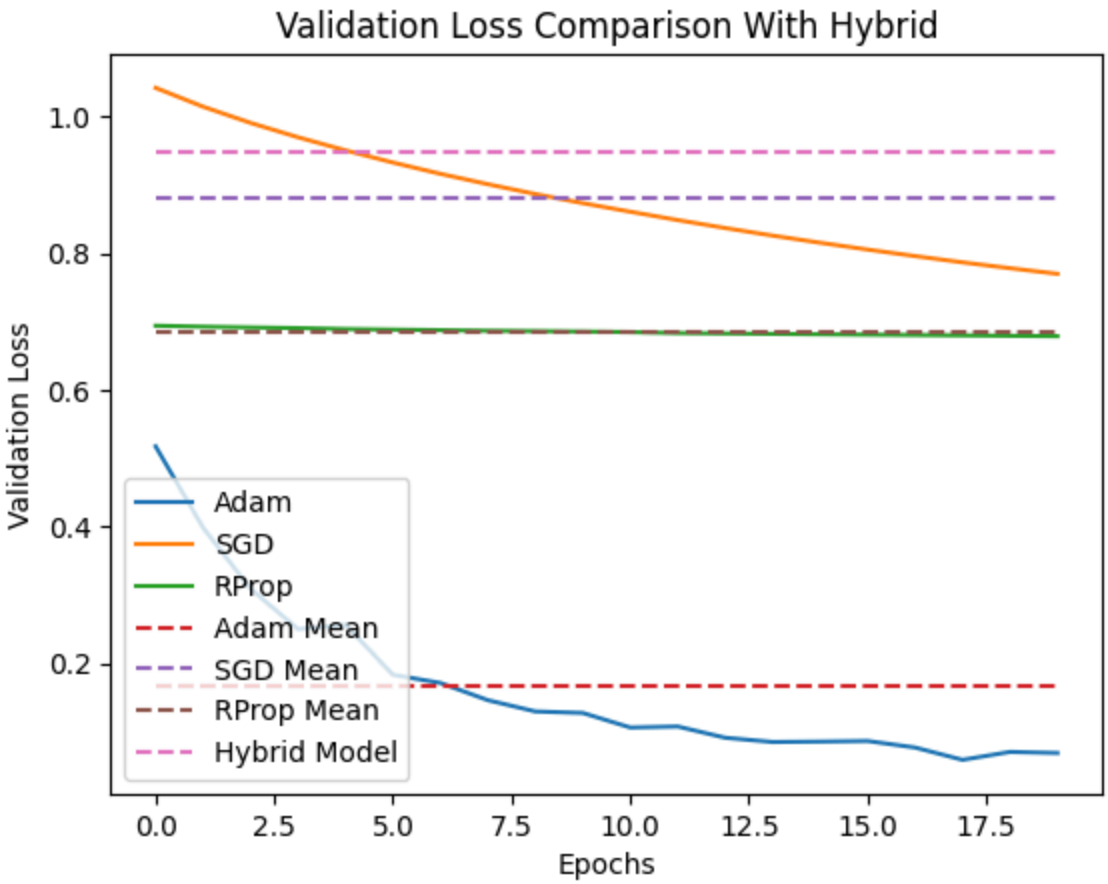
0.6
0.4
0.2
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
Adam
SGD
RProp
Adam Mean
SGD Mean
RProp Mean
Hybrid Model


Validation Loss Comparison With Hybrid
Validation Loss
Epochs
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0.4
0.2
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2.5
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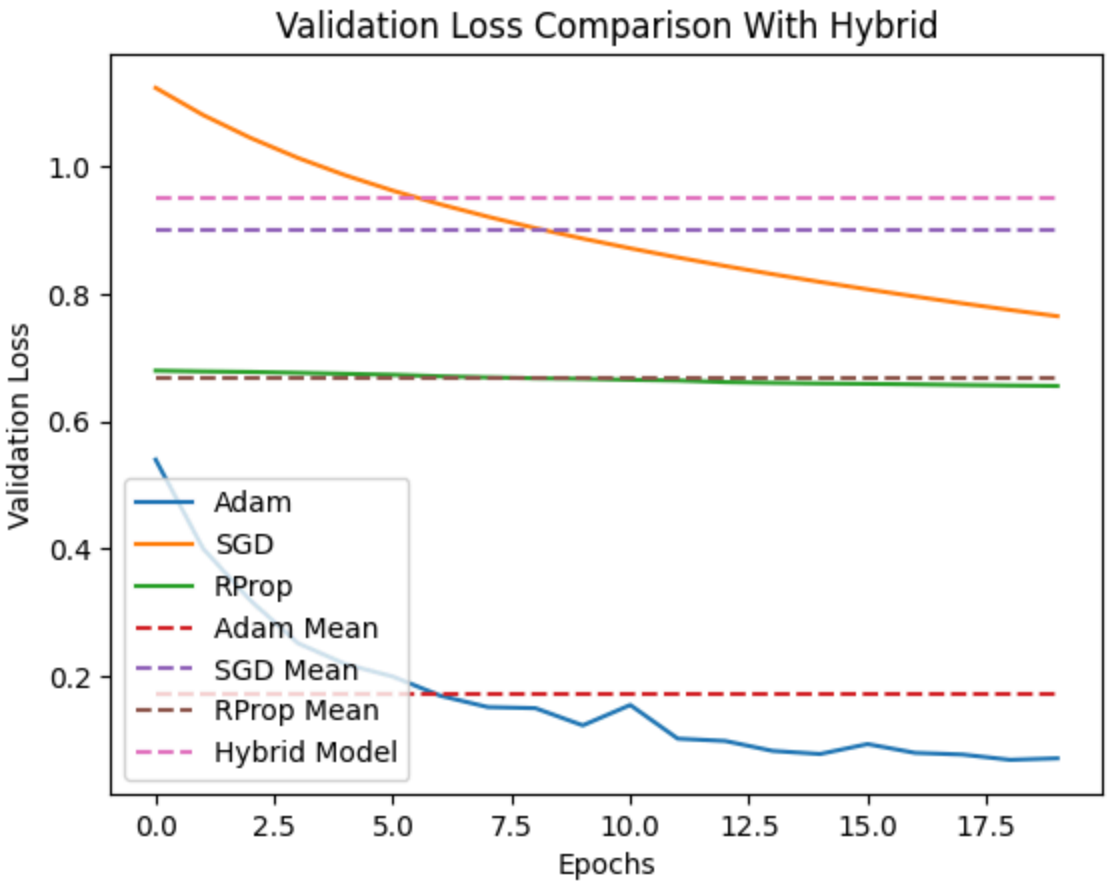
12.5
15.0
17.5
Adam
SGD
RProp
Adam Mean
SGD Mean
RProp Mean
Hybrid Model


Validation Loss Comparison With Hybrid
Validation Loss
Epochs
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0.6
0.4
0.2
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2.5
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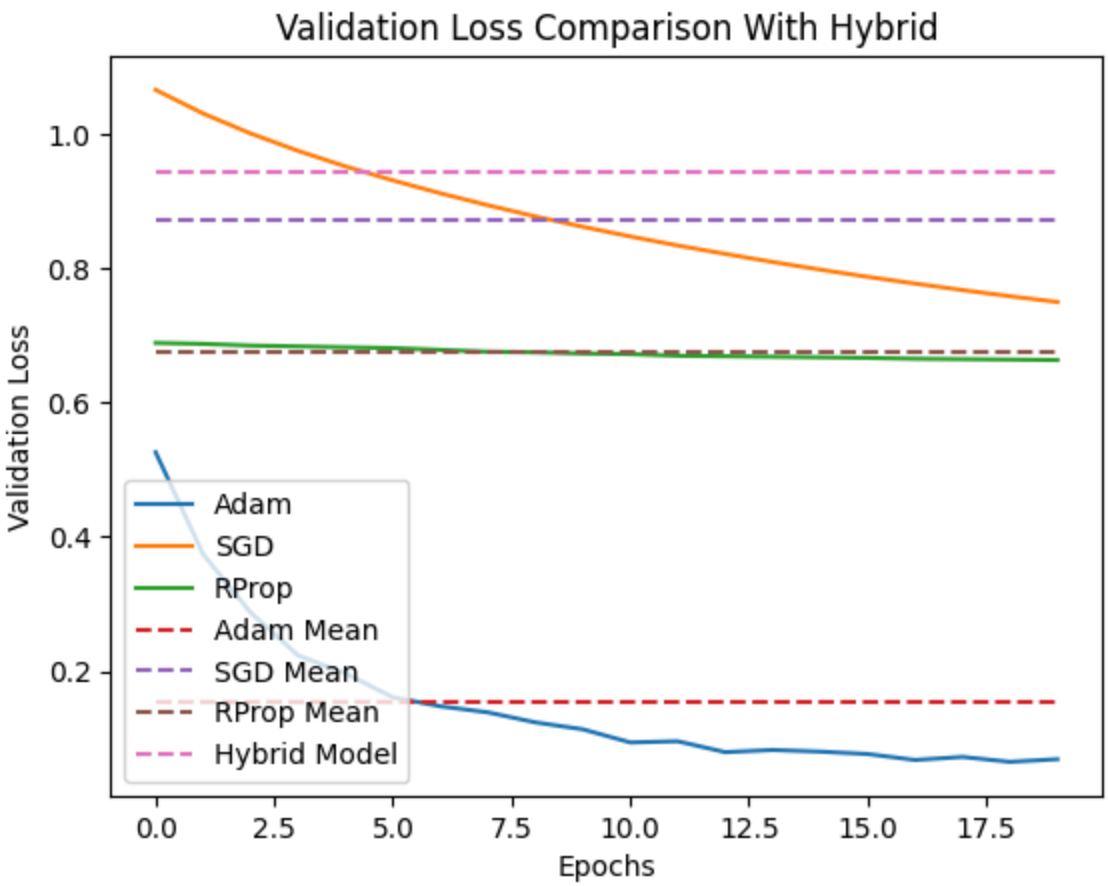
12.5
15.0
17.5
Adam
SGD
RProp
Adam Mean
SGD Mean
RProp Mean
Hybrid Model


Validation Loss Comparison With Hybrid
Validation Loss
Epochs
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0.6
0.4
0.2
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
Adam
SGD
RProp
Adam Mean
SGD Mean
RProp Mean
Hybrid Model