LOG FILE OF MODEL TRAINING

```
Epoch 1/100
0.5582 - mse: 0.3554 - val loss: 38.4065 - val acc: 0.5000 - val mse: 0.5000
Epoch 2/100
0.6066 - mse: 0.2800 - val loss: 78.0129 - val acc: 0.5000 - val mse: 0.5000
Epoch 3/100
0.6939 - mse: 0.2054 - val loss: 5.1002 - val acc: 0.5000 - val mse: 0.4706
Epoch 4/100
0.7535 - mse: 0.1851 - val loss: 1.9840 - val acc: 0.6250 - val mse: 0.3590
Epoch 5/100
0.7632 - mse: 0.1760 - val loss: 0.9667 - val acc: 0.7083 - val mse: 0.2609
Epoch 6/100
0.7756 - mse: 0.1615 - val loss: 0.6739 - val acc: 0.6667 - val mse: 0.2352
Epoch 7/100
0.8144 - mse: 0.1336 - val loss: 1.2834 - val acc: 0.7083 - val mse: 0.2557
Epoch 8/100
0.8684 - mse: 0.1032 - val loss: 7.3074 - val acc: 0.5000 - val mse: 0.4995
Epoch 9/100
0.8283 - mse: 0.1354 - val loss: 1.3334 - val acc: 0.5833 - val mse: 0.3516
Epoch 10/100
0.8324 - mse: 0.1191 - val loss: 1.2279 - val acc: 0.6667 - val mse: 0.2912
Epoch 11/100
mse: 0.0661
Epoch 00011: ReduceLROnPlateau reducing learning rate to 0.0009999999776482583.
0.9114 - mse: 0.0661 - val loss: 0.7348 - val acc: 0.7917 - val mse: 0.1366
Epoch 12/100
0.8366 - mse: 0.1276 - val loss: 0.6836 - val acc: 0.7917 - val mse: 0.1565
Epoch 13/100
0.9626 - mse: 0.0295 - val loss: 0.2524 - val acc: 0.9583 - val mse: 0.0606
Epoch 14/100
0.9875 - mse: 0.0110 - val loss: 0.3449 - val acc: 0.9583 - val mse: 0.0726
Epoch 15/100
```

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0.9806 - mse: 0.0143 - val loss: 0.5089 - val acc: 0.7500 - val mse: 0.1665
0.9945 - mse: 0.0066 - val loss: 0.2617 - val acc: 0.8333 - val mse: 0.0937
Epoch 17/100
0.9917 - mse: 0.0084 - val loss: 0.9323 - val acc: 0.7917 - val mse: 0.1997
Epoch 18/100
0.9834 - mse: 0.0124 - val loss: 0.2172 - val acc: 0.8750 - val mse: 0.0713
Epoch 19/100
0.9889 - mse: 0.0071 - val loss: 0.2061 - val acc: 0.9167 - val mse: 0.0625
Epoch 20/100
0.9917 - mse: 0.0069 - val loss: 0.1694 - val acc: 0.8750 - val mse: 0.0570
Epoch 21/100
0.9986 - mse: 0.0019 - val loss: 0.1683 - val acc: 0.9167 - val mse: 0.0539
Epoch 22/100
0.9986 - mse: 0.0044 - val loss: 0.1902 - val acc: 0.9167 - val mse: 0.0633
Epoch 23/100
0.9972 - mse: 0.0022 - val loss: 0.2539 - val acc: 0.9167 - val mse: 0.0788
0.9945 - mse: 0.0047 - val loss: 0.1648 - val acc: 0.9583 - val mse: 0.0472
Epoch 25/100
0.9931 - mse: 0.0045 - val loss: 0.1745 - val acc: 0.9167 - val mse: 0.0563
Epoch 26/100
0.9945 - mse: 0.0035 - val loss: 0.1731 - val acc: 0.9583 - val mse: 0.0504
Epoch 27/100
0.9945 - mse: 0.0027 - val loss: 0.1634 - val acc: 0.9583 - val mse: 0.0502
Epoch 28/100
0.9972 - mse: 0.0029 - val loss: 0.2004 - val acc: 0.9167 - val mse: 0.0620
Epoch 29/100
0.9945 - mse: 0.0040 - val loss: 0.2280 - val acc: 0.9167 - val mse: 0.0657
Epoch 30/100
0.9986 - mse: 0.0015 - val loss: 0.1912 - val_acc: 0.9583 - val_mse: 0.0565
Epoch 31/100
0.9958 - mse: 0.0034 - val loss: 0.2106 - val acc: 0.9583 - val mse: 0.0593
```

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Epoch 32/100
mse: 2.3839e-04
Epoch 00032: ReduceLROnPlateau reducing learning rate to 9.999999310821295e-05.
1.0000 - mse: 2.3839e-04 - val loss: 0.2148 - val acc: 0.9583 - val mse: 0.0619
Epoch 33/100
1.0000 - mse: 4.2157e-04 - val loss: 0.2089 - val acc: 0.9167 - val mse: 0.0634
0.9958 - mse: 0.0029 - val loss: 0.2021 - val acc: 0.9167 - val mse: 0.0652
Epoch 35/100
1.0000 - mse: 1.7938e-04 - val loss: 0.2019 - val acc: 0.9167 - val mse: 0.0658
Epoch 36/100
0.9986 - mse: 0.0013 - val loss: 0.1987 - val acc: 0.9167 - val mse: 0.0652
Epoch 37/100
mse: 9.1202e-04
Epoch 00037: ReduceLROnPlateau reducing learning rate to 1e-05.
0.9986 - mse: 9.0949e-04 - val loss: 0.1977 - val acc: 0.9167 - val mse: 0.0654
Epoch 38/100
0.9986 - mse: 0.0019 - val loss: 0.1994 - val acc: 0.9167 - val mse: 0.0661
Epoch 39/100
0.9986 - mse: 0.0018 - val loss: 0.2014 - val acc: 0.9167 - val mse: 0.0665
Epoch 40/100
0.9986 - mse: 7.4615e-04 - val loss: 0.2004 - val acc: 0.9167 - val mse: 0.0656
Epoch 41/100
0.9986 - mse: 0.0011 - val loss: 0.1995 - val acc: 0.9167 - val mse: 0.0651
Epoch 42/100
1.0000 - mse: 2.9882e-04 - val loss: 0.1982 - val acc: 0.9167 - val mse: 0.0643
Epoch 43/100
46/46 [=============== ] - 10s 216ms/step - loss: 0.0042 - acc:
1.0000 - mse: 2.9251e-04 - val loss: 0.1977 - val acc: 0.9167 - val mse: 0.0649
Epoch 44/100
0.9972 - mse: 0.0045 - val loss: 0.1981 - val acc: 0.9167 - val mse: 0.0654
Epoch 45/100
0.9986 - mse: 6.1649e-04 - val loss: 0.1993 - val acc: 0.9167 - val mse: 0.0664
Epoch 46/100
```

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1.0000 - mse: 1.7719e-04 - val loss: 0.1997 - val acc: 0.9167 - val mse: 0.0665
Epoch 47/100
0.9986 - mse: 0.0014 - val loss: 0.1978 - val acc: 0.9167 - val mse: 0.0643
Epoch 48/100
0.9945 - mse: 0.0045 - val loss: 0.1985 - val acc: 0.9167 - val mse: 0.0655
Epoch 49/100
0.9986 - mse: 0.0017 - val loss: 0.1994 - val acc: 0.9167 - val mse: 0.0669
Epoch 50/100
0.9986 - mse: 0.0018 - val loss: 0.2013 - val acc: 0.8750 - val mse: 0.0685
0.9986 - mse: 0.0024 - val loss: 0.1984 - val acc: 0.8750 - val mse: 0.0674
Epoch 52/100
0.9958 - mse: 0.0031 - val loss: 0.1959 - val acc: 0.9167 - val mse: 0.0657
Epoch 53/100
1.0000 - mse: 1.6008e-04 - val loss: 0.1937 - val acc: 0.9167 - val mse: 0.0642
Epoch 54/100
0.9986 - mse: 0.0020 - val loss: 0.1951 - val acc: 0.9167 - val mse: 0.0649
0.9986 - mse: 6.4678e-04 - val loss: 0.1950 - val acc: 0.9167 - val mse: 0.0640
Epoch 56/100
0.9986 - mse: 0.0014 - val loss: 0.1940 - val acc: 0.9167 - val mse: 0.0634
Epoch 57/100
0.9986 - mse: 0.0015 - val loss: 0.1943 - val acc: 0.9167 - val mse: 0.0643
Epoch 58/100
0.9986 - mse: 0.0012 - val loss: 0.1940 - val acc: 0.9167 - val mse: 0.0637
Epoch 59/100
1.0000 - mse: 7.0746e-04 - val_loss: 0.1949 - val_acc: 0.9167 - val mse: 0.0650
Epoch 60/100
0.9958 - mse: 0.0036 - val loss: 0.1950 - val acc: 0.9167 - val mse: 0.0651
Epoch 61/100
0.9972 - mse: 0.0014 - val loss: 0.1948 - val_acc: 0.9167 - val_mse: 0.0650
Epoch 62/100
0.9972 - mse: 0.0026 - val loss: 0.1951 - val acc: 0.9167 - val mse: 0.0649
```

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Epoch 63/100
0.9986 - mse: 0.0018 - val loss: 0.1956 - val acc: 0.9167 - val mse: 0.0652
0.9986 - mse: 0.0011 - val loss: 0.1942 - val acc: 0.9167 - val mse: 0.0639
Epoch 65/100
46/46 [=============== ] - 10s 215ms/step - loss: 0.0168 - acc:
0.9945 - mse: 0.0040 - val loss: 0.1942 - val acc: 0.9167 - val mse: 0.0637
1.0000 - mse: 5.3237e-04 - val loss: 0.1941 - val acc: 0.9167 - val mse: 0.0638
Epoch 67/100
0.9958 - mse: 0.0038 - val loss: 0.1954 - val acc: 0.9167 - val mse: 0.0653
Epoch 68/100
0.9931 - mse: 0.0056 - val loss: 0.1955 - val acc: 0.9167 - val mse: 0.0660
Epoch 69/100
0.9986 - mse: 0.0015 - val loss: 0.1950 - val acc: 0.9167 - val mse: 0.0658
Epoch 70/100
1.0000 - mse: 2.3268e-04 - val loss: 0.1946 - val acc: 0.9167 - val mse: 0.0651
Epoch 71/100
0.9958 - mse: 0.0030 - val loss: 0.1941 - val acc: 0.9167 - val mse: 0.0652
Epoch 72/100
0.9945 - mse: 0.0044 - val loss: 0.1937 - val acc: 0.9167 - val mse: 0.0653
Epoch 73/100
1.0000 - mse: 5.1436e-04 - val loss: 0.1914 - val acc: 0.9167 - val mse: 0.0631
Epoch 74/100
0.9986 - mse: 0.0021 - val loss: 0.1916 - val acc: 0.9167 - val mse: 0.0635
Epoch 75/100
1.0000 - mse: 2.3623e-04 - val loss: 0.1913 - val acc: 0.9167 - val mse: 0.0638
Epoch 76/100
1.0000 - mse: 8.4147e-04 - val loss: 0.1918 - val acc: 0.9167 - val mse: 0.0642
Epoch 77/100
0.9986 - mse: 0.0016 - val loss: 0.1907 - val acc: 0.9167 - val mse: 0.0640
Epoch 78/100
46/46 [============== ] - 10s 214ms/step - loss: 0.0059 - acc:
1.0000 - mse: 4.4940e-04 - val loss: 0.1909 - val acc: 0.9167 - val mse: 0.0637
Epoch 79/100
```

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0.9958 - mse: 0.0031 - val loss: 0.1909 - val acc: 0.9167 - val mse: 0.0636
Epoch 80/100
1.0000 - mse: 5.6174e-04 - val loss: 0.1898 - val acc: 0.9167 - val mse: 0.0626
Epoch 81/100
0.9972 - mse: 0.0023 - val loss: 0.1904 - val acc: 0.9167 - val mse: 0.0631
Epoch 82/100
0.9945 - mse: 0.0026 - val loss: 0.1900 - val acc: 0.9167 - val mse: 0.0629
Epoch 83/100
46/46 [============== ] - 10s 215ms/step - loss: 0.0053 - acc:
0.9986 - mse: 8.4819e-04 - val loss: 0.1906 - val acc: 0.9167 - val mse: 0.0625
1.0000 - mse: 5.4306e-04 - val loss: 0.1912 - val acc: 0.9167 - val mse: 0.0622
Epoch 85/100
0.9958 - mse: 0.0033 - val loss: 0.1913 - val acc: 0.9167 - val mse: 0.0626
Epoch 86/100
1.0000 - mse: 4.4754e-04 - val loss: 0.1903 - val acc: 0.9167 - val mse: 0.0623
Epoch 87/100
0.9986 - mse: 0.0020 - val loss: 0.1898 - val acc: 0.9167 - val mse: 0.0622
0.9986 - mse: 0.0018 - val loss: 0.1898 - val acc: 0.9167 - val mse: 0.0622
Epoch 89/100
0.9986 - mse: 0.0019 - val loss: 0.1900 - val acc: 0.9167 - val mse: 0.0627
Epoch 90/100
1.0000 - mse: 0.0013 - val loss: 0.1902 - val acc: 0.9167 - val mse: 0.0625
Epoch 91/100
0.9972 - mse: 0.0026 - val loss: 0.1906 - val acc: 0.9167 - val mse: 0.0628
Epoch 92/100
0.9972 - mse: 0.0018 - val_loss: 0.1922 - val_acc: 0.9167 - val mse: 0.0644
Epoch 93/100
0.9986 - mse: 0.0013 - val loss: 0.1899 - val acc: 0.9167 - val mse: 0.0628
Epoch 94/100
0.9986 - mse: 0.0013 - val loss: 0.1887 - val_acc: 0.9167 - val_mse: 0.0623
Epoch 95/100
1.0000 - mse: 8.2135e-04 - val loss: 0.1888 - val acc: 0.9167 - val mse: 0.0626
```

```
Epoch 96/100

46/46 [=================] - 10s 215ms/step - loss: 0.0097 - acc: 0.9972 - mse: 0.0018 - val_loss: 0.1891 - val_acc: 0.9167 - val_mse: 0.0624

Epoch 97/100

46/46 [==================] - 10s 215ms/step - loss: 0.0045 - acc: 1.0000 - mse: 3.2343e-04 - val_loss: 0.1896 - val_acc: 0.9167 - val_mse: 0.0629

Epoch 98/100

46/46 [===================] - 10s 215ms/step - loss: 0.0038 - acc: 1.0000 - mse: 2.1530e-04 - val_loss: 0.1875 - val_acc: 0.9167 - val_mse: 0.0614

Epoch 99/100

46/46 [=======================] - 10s 215ms/step - loss: 0.0229 - acc: 0.9986 - mse: 0.0023 - val_loss: 0.1914 - val_acc: 0.9167 - val_mse: 0.0639

Epoch 100/100

46/46 [===============================] - 10s 216ms/step - loss: 0.0094 - acc: 0.9958 - mse: 0.0020 - val_loss: 0.1921 - val_acc: 0.9167 - val_mse: 0.0644
```