Exp 5 output

```
Model: "sequential_3"
   Layer (type)
                                  Output Shape
                                                              Param #
   simple_rnn (SimpleRNN)
                                  (None, 50)
   dense_6 (Dense)
  Total params: 2,651 (10.36 KB)
                       (10.36 KB)
  Trainable params: 2,6
  Non-trainable params: 0 (0.00 B)
  Epoch 1/50
                        - 1s 14ms/step - loss: 8.7038 - val_loss: 6.4313
 22/22 -
 Epoch 2/50
                         - 0s 5ms/step - loss: 5.8413 - val_loss: 1.4829
 22/22 -
 Epoch 3/50
 22/22 -
                         - 0s 5ms/step - loss: 0.8674 - val_loss: 0.5199
 Epoch 4/50
 22/22 -
                          0s 5ms/step - loss: 0.3340 - val_loss: 0.1830
 Epoch 5/50
 22/22 -
                          0s 5ms/step - loss: 0.2107 - val_loss: 0.1112
Epoch 6/50
                            - 0s 5ms/step - loss: 0.0829 - val_loss. 0.0021
22/22
Epoch 7/50
22/22 -
                             0s 5ms/step - loss: 0.0615 - val_loss: 0.0854
Epoch 8/50
                             0s 5ms/step - loss: 0.0669 - val_loss: 0.0825
22/22 -
Epoch 9/50
22/22 -
                             0s 5ms/step - loss: 0.0581 - val_loss: 0.0559
Epoch 10/50
22/22 -
                             0s 4ms/step - loss: 0.0543 - val_loss: 0.0593
Epoch 11/50
                             0s 4ms/step - loss: 0.0455 - val_loss: 0.0532
22/22 -
Epoch 12/50
                             0s 5ms/step - loss: 0.0420 - val_loss: 0.0443
22/22 -
Epoch 13/50
                             0s 4ms/step - loss: 0.0327 - val_loss: 0.0455
22/22 -
Epoch 14/50
                             0s 4ms/step - loss: 0.0435 - val_loss: 0.0449
22/22 -
Epoch 15/50
                             0s 5ms/step - loss: 0.0353 - val_loss: 0.0470
22/22 -
Epoch 16/50
22/22 -
                             0s 5ms/step - loss: 0.0418 - val_loss: 0.0418
```

| Enach | | |
|---|---|---|
| | 18/50 | |
| | | - 0s 5ms/step - loss: 0.0349 - val_loss: 0.0330 |
| - | 19/50 | |
| | | - 0s 4ms/step - loss: 0.0272 - val_loss: 0.0378 |
| - | 20/50 | |
| 22/22 | | - 0s 4ms/step - loss: 0.0329 - val_loss: 0.0327 |
| Epoch | 21/50 | |
| 22/22 | | - 0s 5ms/step - loss: 0.0398 - val_loss: 0.0664 |
| Epoch | 22/50 | |
| 22/22 | | - 0s 5ms/step - loss: 0.0603 - val_loss: 0.0442 |
| | 23/50 | |
| 22/22 | | - 0s 5ms/step - loss: 0.0254 - val_loss: 0.0375 |
| | 24/50 | |
| 22/22 | | - 0 s 4ms/step - loss: 0.0322 - val_loss: 0.0678 |
| Epoch | 25/50 | |
| 22/22 | | - 0 s 4ms/step - loss: 0.0365 - val_loss: 0.0344 |
| Epoch | 26/50 | |
| 22/22 | | - 0 s 5ms/step - loss: 0.0245 - val_loss: 0.0303 |
| | 27/50 | |
| 22/22 | | - 0s 4ms/step - loss: 0.0218 - val_loss: 0.0458 |
| | 28/50 | |
| 22/22 | | - 0 s 5ms/step - loss: 0.0261 - val_loss: 0.0367 |
| 22/22 | | — 0s 5ms/step - loss: 0.0243 - val_loss ↑ ↓ 🎾 |
| | 30/50 | |
| LDOCII | שכושכ | |
| | | - 0s 4ms/step - loss: 0.0174 - val loss: 0.0304 |
| 22/22 | | — 0s 4ms/step - loss: 0.0174 - val_loss: 0.0304 |
| 22/22 Epoch | 31/50 | |
| 22/22 Epoch 22/22 | 31/50 | <pre>- 0s 4ms/step - loss: 0.0174 - val_loss: 0.0304 - 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262</pre> |
| 22/22 Epoch 22/22 Epoch | 31/50 | — 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 |
| 22/22 Epoch 22/22 Epoch 22/22 | 31/50 | |
| 22/22 Epoch 22/22 Epoch 22/22 Epoch | 31/50 32/50 33/50 | <pre>- 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 - 0s 9ms/step - loss: 0.0218 - val_loss: 0.0487</pre> |
| 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 | 31/50 32/50 33/50 | — 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 |
| 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch | 31/50 32/50 33/50 34/50 | - 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 - 0s 9ms/step - loss: 0.0218 - val_loss: 0.0487 - 0s 9ms/step - loss: 0.0292 - val_loss: 0.0429 |
| 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 | 31/50 32/50 33/50 34/50 | <pre>- 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 - 0s 9ms/step - loss: 0.0218 - val_loss: 0.0487</pre> |
| 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch | 31/50 32/50 33/50 34/50 35/50 | - 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 - 0s 9ms/step - loss: 0.0218 - val_loss: 0.0487 - 0s 9ms/step - loss: 0.0292 - val_loss: 0.0429 - 0s 8ms/step - loss: 0.0234 - val_loss: 0.0273 |
| 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 | 31/50 32/50 33/50 34/50 35/50 | - 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 - 0s 9ms/step - loss: 0.0218 - val_loss: 0.0487 - 0s 9ms/step - loss: 0.0292 - val_loss: 0.0429 |
| 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch | 31/50 32/50 33/50 34/50 35/50 36/50 | - 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 - 0s 9ms/step - loss: 0.0218 - val_loss: 0.0487 - 0s 9ms/step - loss: 0.0292 - val_loss: 0.0429 - 0s 8ms/step - loss: 0.0234 - val_loss: 0.0273 - 0s 9ms/step - loss: 0.0177 - val_loss: 0.0268 |
| 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 | 31/50 32/50 33/50 34/50 35/50 36/50 | - 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 - 0s 9ms/step - loss: 0.0218 - val_loss: 0.0487 - 0s 9ms/step - loss: 0.0292 - val_loss: 0.0429 - 0s 8ms/step - loss: 0.0234 - val_loss: 0.0273 |
| Epoch 22/22 Epoch | 31/50 32/50 33/50 34/50 35/50 36/50 37/50 | - 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 - 0s 9ms/step - loss: 0.0218 - val_loss: 0.0487 - 0s 9ms/step - loss: 0.0292 - val_loss: 0.0429 - 0s 8ms/step - loss: 0.0234 - val_loss: 0.0273 - 0s 9ms/step - loss: 0.0177 - val_loss: 0.0268 - 0s 7ms/step - loss: 0.0195 - val_loss: 0.0363 |
| 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 | 31/50 32/50 33/50 34/50 35/50 36/50 37/50 | - 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 - 0s 9ms/step - loss: 0.0218 - val_loss: 0.0487 - 0s 9ms/step - loss: 0.0292 - val_loss: 0.0429 - 0s 8ms/step - loss: 0.0234 - val_loss: 0.0273 - 0s 9ms/step - loss: 0.0177 - val_loss: 0.0268 |
| 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch | 31/50 32/50 33/50 34/50 35/50 36/50 37/50 38/50 | - 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 - 0s 9ms/step - loss: 0.0218 - val_loss: 0.0487 - 0s 9ms/step - loss: 0.0292 - val_loss: 0.0429 - 0s 8ms/step - loss: 0.0234 - val_loss: 0.0273 - 0s 9ms/step - loss: 0.0177 - val_loss: 0.0268 - 0s 7ms/step - loss: 0.0195 - val_loss: 0.0363 - 0s 5ms/step - loss: 0.0209 - val_loss: 0.0274 |
| 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 | 31/50 32/50 33/50 34/50 35/50 36/50 37/50 38/50 | - 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 - 0s 9ms/step - loss: 0.0218 - val_loss: 0.0487 - 0s 9ms/step - loss: 0.0292 - val_loss: 0.0429 - 0s 8ms/step - loss: 0.0234 - val_loss: 0.0273 - 0s 9ms/step - loss: 0.0177 - val_loss: 0.0268 - 0s 7ms/step - loss: 0.0195 - val_loss: 0.0363 |
| 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch | 31/50 32/50 33/50 34/50 35/50 36/50 37/50 38/50 39/50 | - 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 - 0s 9ms/step - loss: 0.0218 - val_loss: 0.0487 - 0s 9ms/step - loss: 0.0292 - val_loss: 0.0429 - 0s 8ms/step - loss: 0.0234 - val_loss: 0.0273 - 0s 9ms/step - loss: 0.0177 - val_loss: 0.0268 - 0s 7ms/step - loss: 0.0195 - val_loss: 0.0363 - 0s 5ms/step - loss: 0.0209 - val_loss: 0.0274 - 0s 4ms/step - loss: 0.0160 - val_loss: 0.0257 |
| 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 Epoch 22/22 | 31/50 32/50 33/50 34/50 35/50 36/50 37/50 38/50 39/50 | - 0s 5ms/step - loss: 0.0226 - val_loss: 0.0262 - 0s 9ms/step - loss: 0.0218 - val_loss: 0.0487 - 0s 9ms/step - loss: 0.0292 - val_loss: 0.0429 - 0s 8ms/step - loss: 0.0234 - val_loss: 0.0273 - 0s 9ms/step - loss: 0.0177 - val_loss: 0.0268 - 0s 7ms/step - loss: 0.0195 - val_loss: 0.0363 - 0s 5ms/step - loss: 0.0209 - val_loss: 0.0274 |

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Epoch 45/50
22/22 ----
                      — 0s 5ms/step - loss: 0.0145 - val_loss: 0.0255
Epoch 46/50
                        - 0s 6ms/step - loss: 0.0211 - val_loss: 0.0268
22/22 ---
Epoch 47/50
                         - 0s 5ms/step - loss: 0.0201 - val_loss: 0.0266
22/22 -
Epoch 48/50
22/22 ----
                         - 0s 5ms/step - loss: 0.0201 - val_loss: 0.0210
Epoch 49/50
22/22 ----
                        - 0s 5ms/step - loss: 0.0130 - val_loss: 0.0265
Epoch 50/50
22/22 —
                        - 0s 5ms/step - loss: 0.0172 - val_loss: 0.0241
                      - 0s 4ms/step - loss: 0.0235
7/7 —
Test Loss: 0.0227
7/7 -----
                    --- 0s 20ms/step
Test Accuracy (R^2): 0.9976
                   Os 33ms/step
Predictions for new data:
[[ 1.6393566]
[ 0.5675767]
[-2.2151742]
[-0.2966516]
[-3.7837343]]
```