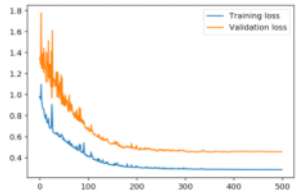
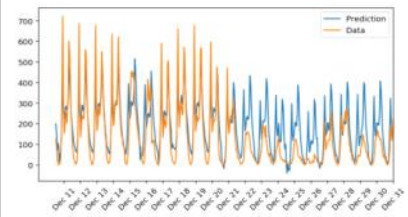
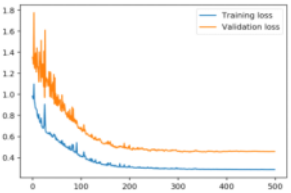
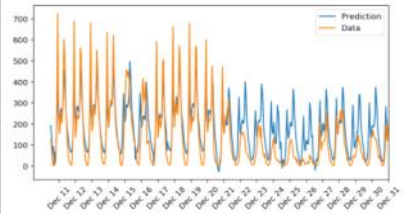
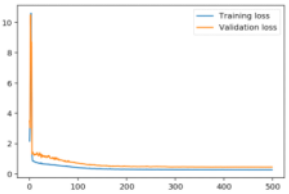
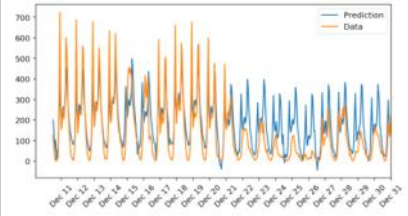
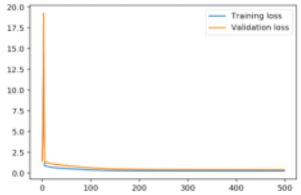
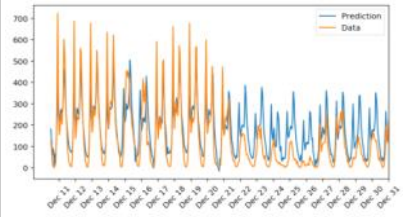
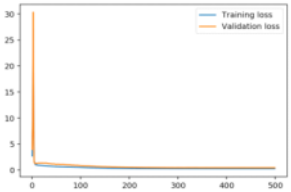
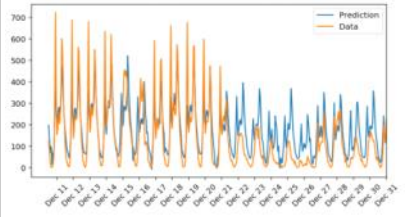
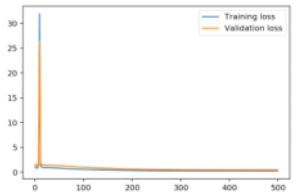
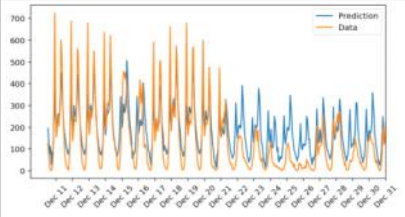
Nanodegree - NN - First Neural Network

Tuesday 26 January 2021 12:27

Parameters	Training	Fitting on December	Performance Overall
`` ## # Set your hyperparameters here ## iterations = 500 learning_rate = 0.65 hidden_nodes = 10 output_nodes = 1 ```	Progress: 99.8% ... Training loss: 0.286 ... Validation loss: 0.458 ``` plt.plot(losses['train'], label='Training loss') plt.plot(losses['validation'], label='Validation loss') plt.legend() _ = plt.ylim() ``` 		``` Mean Squared Error Overall 0.004243110724l9 Explained Variance Score 0.7011857531g6 Median Absolute Error 0.29385037849 ```
`` ## # Set your hyperparameters here ## iterations = 500 learning_rate = 0.65 hidden_nodes = 15 output_nodes = 1 ``` Screen clipping taken: 26/01/2021 16:07	Progress: 99.8% ... Training loss: 0.274 ... Validation loss: 0.454 ``` plt.plot(losses['train'], label='Training loss') plt.plot(losses['validation'], label='Validation loss') plt.legend() _ = plt.ylim() ``` 		``` Mean Squared Error Overall 0.004126876898873 Explained Variance Score 0.712698809778 Median Absolute Error 0.284261384653 ``` Screen clipping taken: 26/01/2021 16:09
`` ## # Set your hyperparameter ## iterations = 500 learning_rate = 0.70 hidden_nodes = 15 output_nodes = 1 ``` Screen clipping taken: 26/01/2021 16:10	Progress: 99.8% ... Training loss: 0.270 ... Validation loss: 0.454 ``` plt.plot(losses['train'], label='Training loss') plt.plot(losses['validation'], label='Validation loss') plt.legend() _ = plt.ylim() ``` 	 Screen clipping taken: 26/01/2021 16:11	``` Mean Squared Error Overall 0.004096068200001 Explained Variance Score 0.716894671498 Median Absolute Error 0.279018979144 ``` Screen clipping taken: 26/01/2021 16:12
`` ## # Set your hyperparameters here ## iterations = 500 learning_rate = 0.75 hidden_nodes = 15 output_nodes = 1 ``` Screen clipping taken: 26/01/2021 16:13	Progress: 99.8% ... Training loss: 0.259 ... Validation loss: 0.435 ``` plt.plot(losses['train'], label='Training loss') plt.plot(losses['validation'], label='Validation loss') plt.legend() _ = plt.ylim() ```  Screen clipping taken: 26/01/2021 16:14	 Screen clipping taken: 26/01/2021 16:15	``` Mean Squared Error Overall 0.004014980511397 Explained Variance Score 0.72799247482 Median Absolute Error 0.256751845060 ``` Screen clipping taken: 26/01/2021 16:15
`` ## # Set your hyperparameters here ## iterations = 500 learning_rate = 0.80 hidden_nodes = 15 output_nodes = 1 ``` Screen clipping taken: 26/01/2021 16:18	Progress: 99.8% ... Training loss: 0.261 ... Validation loss: 0.439 ``` plt.plot(losses['train'], label='Training loss') plt.plot(losses['validation'], label='Validation loss') plt.legend() _ = plt.ylim() ```  Screen clipping taken: 26/01/2021 16:18	 Screen clipping taken: 26/01/2021 16:20	``` Mean Squared Error Overall 0.004032914425B2 Explained Variance Score 0.72555489478 Median Absolute Error 0.257489192444 ```
`` ## # Set your hyperparameters here ## iterations = 500 learning_rate = 0.7725 hidden_nodes = 15 output_nodes = 1 ``` Screen clipping taken: 26/01/2021 16:22	Progress: 99.8% ... Training loss: 0.270 ... Validation loss: 0.481 ``` plt.plot(losses['train'], label='Training loss') plt.plot(losses['validation'], label='Validation loss') plt.legend() _ = plt.ylim() ``` 	 Screen clipping taken: 26/01/2021 16:29	``` Mean Squared Error Overall 0.00411902927l Explained Variance Score 0.713765398162 Median Absolute Error 0.2616182416l5 ```

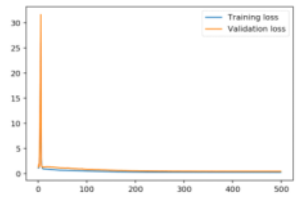
Screen clipping taken: 26/01/2021 16:26

```
################################
# Set your hyperparameters here
################################
iterations = 500
learning_rate = 0.76
hidden_nodes = 15
output_nodes = 1
```

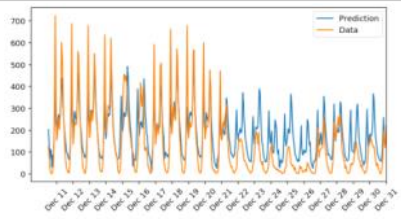
Screen clipping taken: 26/01/2021 17:34

```
Progress: 99.8% ... Training loss: 0.271 ... Validation loss: 0.464
```

```
plt.plot(losses['train'], label='Training loss')
plt.plot(losses['validation'], label='Validation loss')
plt.legend()
_ = plt.ylim()
```



Screen clipping taken: 26/01/2021 17:36



Screen clipping taken: 26/01/2021 17:36

```
Mean Squared Error Overall 0.08414617271625
Explained Variance Score 0.714464484434
Median Absolute Error 0.273875378654
```

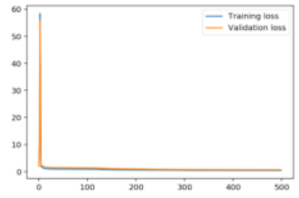
Screen clipping taken: 26/01/2021 17:37

```
################################
# Set your hyperparameters here
################################
iterations = 500
learning_rate = 0.75
hidden_nodes = 20
output_nodes = 1
```

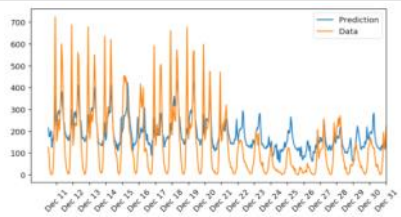
Screen clipping taken: 26/01/2021 17:39

```
Progress: 99.8% ... Training loss: 0.440 ... Validation loss: 0.701
```

```
plt.plot(losses['train'], label='Training loss')
plt.plot(losses['validation'], label='Validation loss')
plt.legend()
_ = plt.ylim()
```



Screen clipping taken: 26/01/2021 17:40



Screen clipping taken: 26/01/2021 17:41

```
Mean Squared Error Overall 0.00521889711002
Explained Variance Score 0.543756663464
Median Absolute Error 0.431807123111
```

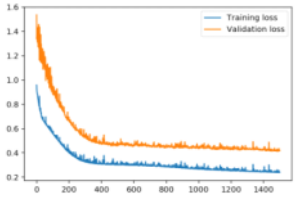
Screen clipping taken: 26/01/2021 17:41

```
########################
# Set your hyperparamete
########################
iterations = 1500
learning_rate = 0.30
hidden_nodes = 15
output_nodes = 1
```

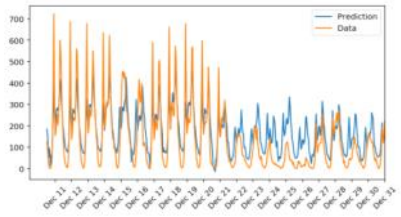
Screen clipping taken: 26/01/2021 19:38

```
Progress: 99.9% ... Training loss: 0.237 ... Validation loss: 0.416
```

```
plt.plot(losses['train'], label='Training loss')
plt.plot(losses['validation'], label='Validation loss')
plt.legend()
_ = plt.ylim()
```



Screen clipping taken: 26/01/2021 19:39



Screen clipping taken: 26/01/2021 19:39

```
Mean Squared Error Overall 0.00388831150918
Explained Variance Score 0.740117373203
Median Absolute Error 0.265256349212
```

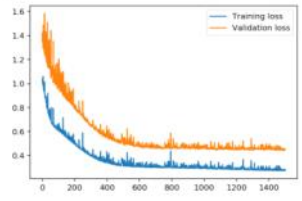
Screen clipping taken: 26/01/2021 19:39

```
################################
# Set your hyperparameters here
################################
iterations = 1500
learning_rate = 0.20
hidden_nodes = 30
output_nodes = 1
```

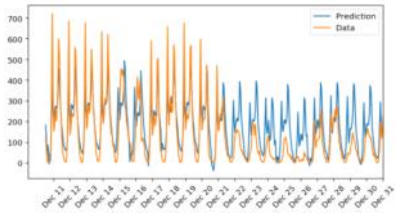
Screen clipping taken: 26/01/2021 19:44

```
Progress: 99.9% ... Training loss: 0.274 ... Validation loss: 0.446
```

```
plt.plot(losses['train'], label='Training loss')
plt.plot(losses['validation'], label='Validation loss')
plt.legend()
_ = plt.ylim()
```



Screen clipping taken: 26/01/2021 19:44



Screen clipping taken: 26/01/2021 19:45

```
Mean Squared Error Overall 0.00415420598478
Explained Variance Score 0.714348223349
Median Absolute Error 0.284811510761
```

Screen clipping taken: 26/01/2021 19:45

```
################################
# Set your hyperparameters here
################################
iterations = 1500
learning_rate = 0.15
hidden_nodes = 48
output_nodes = 1
```

Screen clipping taken: 26/01/2021 19:45

```
Progress: 99.9% ... Training loss: 0.383 ... Validation loss: 0.544
```

Screen clipping taken: 26/01/2021 19:47

```
################################
# Set your hyperparameters here
################################
iterations = 1500
learning_rate = 0.10
hidden_nodes = 80
output_nodes = 1
```

Screen clipping taken: 26/01/2021 19:48

```
Progress: 99.9% ... Training loss: 0.293 ... Validation loss: 0.460
```

Screen clipping taken: 26/01/2021 19:51

```
################################
# Set your hyperparameters here
################################
iterations = 1500
learning_rate = 0.30
hidden_nodes = 200
output_nodes = 1
```

Screen clipping taken: 26/01/2021 19:58

```
Progress: 99.9% ... Training loss: 0.914 ... Validation loss: 1.351
```

Screen clipping taken: 26/01/2021 19:58

`` ##################################### # Set your hyperparameters here ##################################### iterations = 1500 learning_rate = 0.50 hidden_nodes = 77 output_nodes = 1 ``` Screen clipping taken: 26/01/2021 19:59	``` Progress: 99.9% ... Training loss: 0.922 ... Validation loss: 1.374 ``` Screen clipping taken: 26/01/2021 20:02		
`` ##################################### # Set your hyperparameters here ##################################### iterations = 1500 learning_rate = 0.25 hidden_nodes = 33 output_nodes = 1 ``` Screen clipping taken: 26/01/2021 20:02	``` Progress: 99.9% ... Training loss: 0.325 ... Validation loss: 0.499 ``` Screen clipping taken: 26/01/2021 20:04		
`` ##################################### # Set your hyperparameters here ##################################### iterations = 1500 learning_rate = 0.20 hidden_nodes = 40 output_nodes = 1 ``` Screen clipping taken: 26/01/2021 20:05			

Screen clipping taken: 26/01/2021 12:27