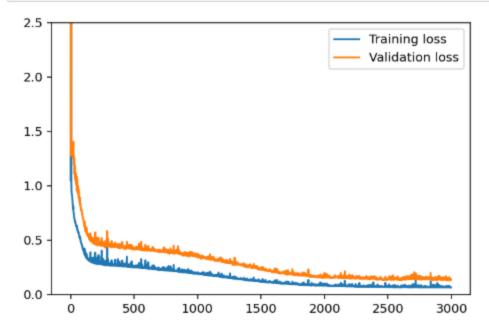
## Compare Results

```
iterations = 3000
learning_rate = 0.8
hidden_nodes = 14
output_nodes = 1
Progress: 100.0% ... Training loss: 0.066 ... Validation loss: 0.164
```

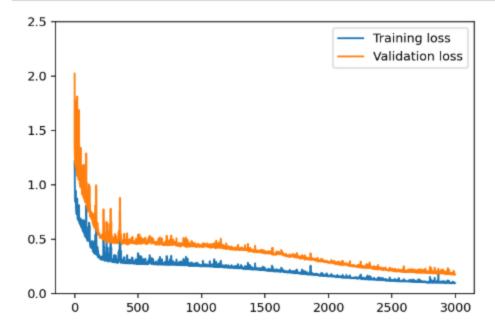
```
plt.plot(losses['train'], label='Training loss')
plt.plot(losses['validation'], label='Validation loss')
plt.legend()
_ = plt.ylim(top=2.5, bottom=0)
```

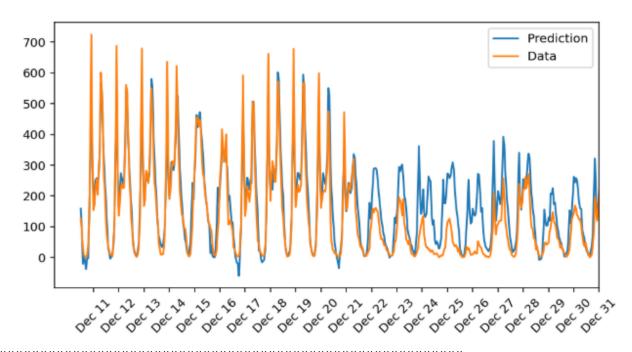


iterations = 3000 learning\_rate = 0.5 hidden\_nodes = 14 output\_nodes = 1

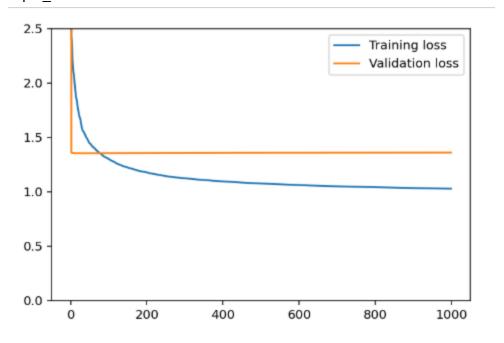
Progress: 100.0% ... Training loss: 0.079 ... Validation loss: 0.197

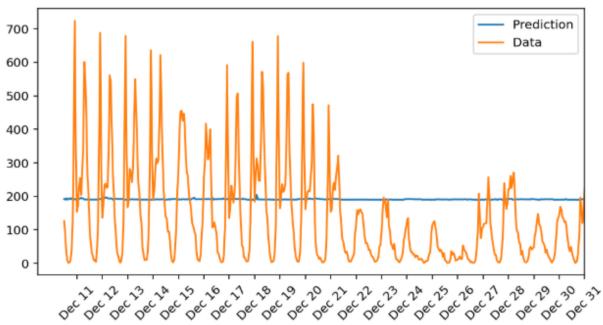
```
plt.plot(losses['train'], label='Training loss')
plt.plot(losses['validation'], label='Validation loss')
plt.legend()
_ = plt.ylim(top=2.5, bottom=0)
```



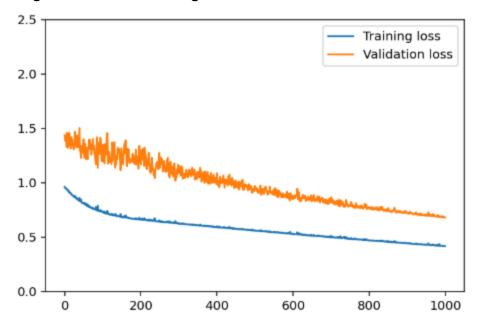


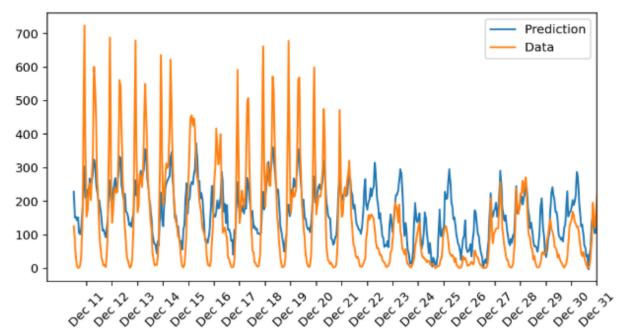
 iterations = 1000 learning\_rate = 0.5 hidden\_nodes = 56 output\_nodes = 1





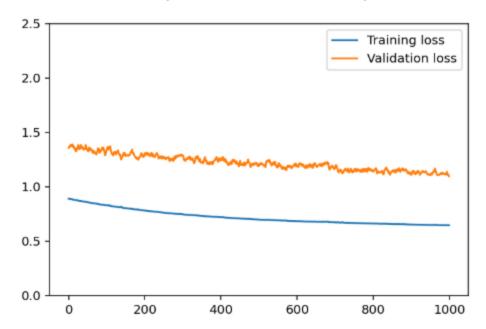
Progress: 99.9% ... Training loss: 0.415 ... Validation loss: 0.679

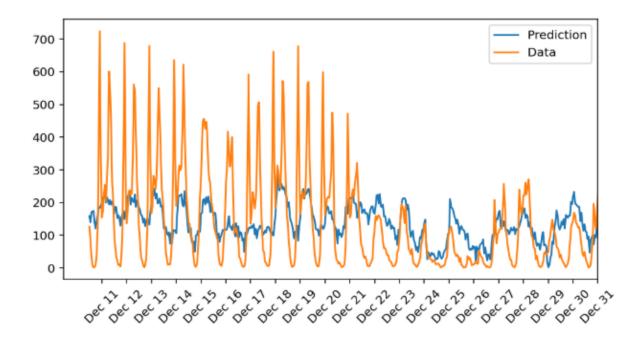




Progress: 99.9% ... Training loss: 0.644 ... Validation loss: 1.095

This is worse after setting hidden nodes up and learning rate down





Progress: 100.0% ... Training loss: 0.281 ... Validation loss: 0.448

