

Begonnen am Dienstag, 18. Oktober 2022, 09:22

Status Beendet

Beendet am Dienstag, 18. Oktober 2022, 09:51

Verbrauchte Zeit 28 Minuten 20 Sekunden

Frage **1**

Vollständig

Erreichbare Punkte: 4,00

Please write your answers to Task 1 in the text box below.

What is the optimal value of the polynomial degrees?

The optimum degree for the training set is around 3 and for the test set it's around 4 or 5 degree.

For example in the training set after degree 3 the change in MSE is not significantly larger than from 2 to 3.

Do the values of MSE training and MSE test behave similarly?

Not quite.

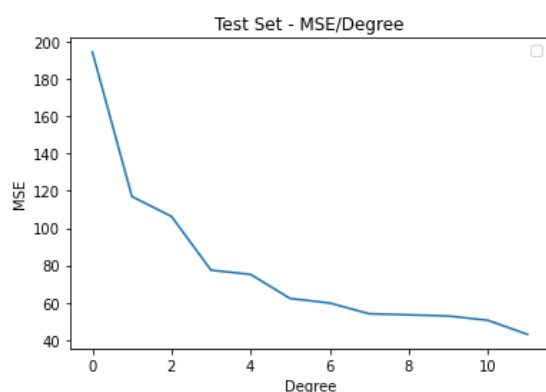
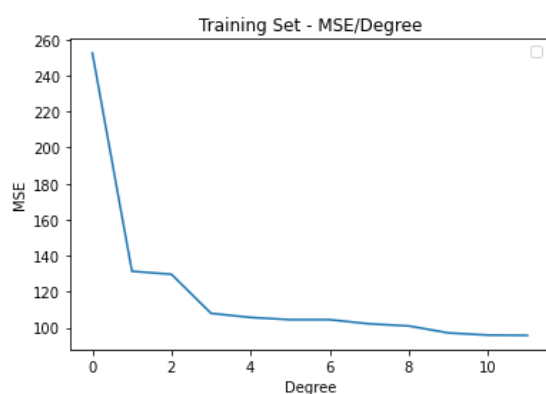
I suspect it's because the training set has fewer data points and so we get to smaller MSEs with relatively small degrees more quickly.

For example in the training set with the degree of 4 our MSE is around 110 and in the test set we're already at 80 MSE.

What event takes place in the models with polynomial degrees ≥ 8 ?

I think the model tries to overfit the data and the change in MSE is minimal.

This model might have a good MSE but the prediction is not as useful at this point and the computation gets heavier.



Frage **2**

Vollständig

Erreichbare Punkte: 1,00

Please write your answers to Task 2 in the text box below.

$$h(v) = \theta_0 * 3^0 + \theta_1 * 2^1 + \theta_2 * 0^2$$

$$h_{\theta} \left(\begin{bmatrix} 3 \\ 2 \\ 0 \end{bmatrix} \right) = \theta_0 * 3^0 + \theta_1 * 2^1 + \theta_2 * 0^2$$

Frage **3**

Vollständig

Erreichbare Punkte: 5,00

Please write your answers to Task 3 in the text box below.

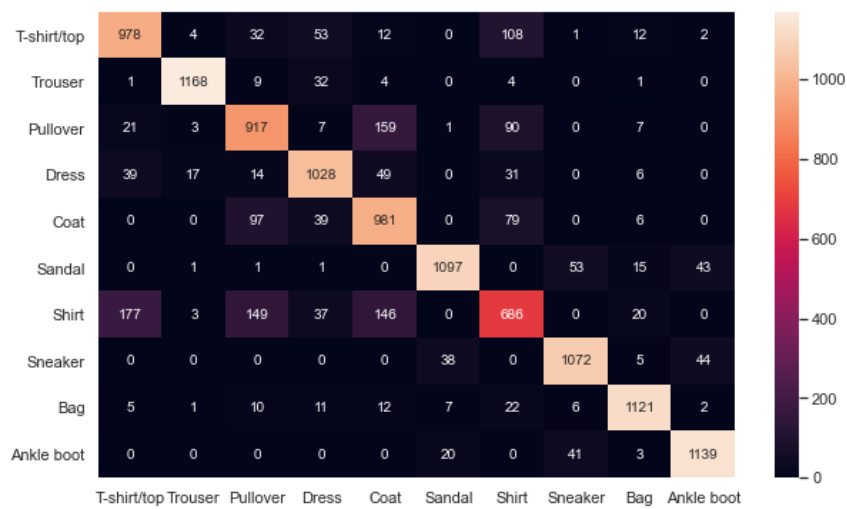
- F-Score
- Confusion Matrix

F-Score <micro>:

0.8489166666666668

F-Score <macro>:

0.8481887789017517



◀ Lab 04: Polynomial & Logistic Regression

Direkt zu:

Pre-Class Reading ►