

Improve your regression model

Starting from your initial regression model which you developed in Task 08, your task is to implement and evaluate an improvement of the model.

1. Choose at least two of the improvements discussed in the lecture and add it to your implementation of your initial model:
 - a) Increase the number of parameters (e.g., by increasing the number of hidden units or layers) and choose a suitable regularization
 - b) Choose a suitable data preprocessing / feature engineering (e.g., normalization, computing additional features) or data augmentation
 - c) Make use of the fact that the dataset is a time series and use previous target values as additional features
 - d) Or, implement another potential model improvement of your own choice
2. In ML research, the effect of model components is often evaluated in terms of *ablation experiments*. This means, you evaluate your model both with and without each of the components / improvements to assess the effect each component has on performance. You can find further information on ablations here: <https://stats.stackexchange.com/questions/380040/what-is-an-ablation-study-and-is-there-a-systematic-way-to-design-sensible-ablations>. Design sensible ablations to show the effect that each of your improvements (as well as their combinations) has on model performance and run the experiments.

Upload your solution to Stud.IP until May 18.