TASK 2

POWER PRICE PREDICTION

You are in the group Deepforgetting consisting of junterhol (junterhol@student.ethz.ch (mailto://junterhol@student.ethz.ch)), merklec (merklec@student.ethz.ch (mailto://merklec@student.ethz.ch)) and ribadov (ribadov@student.ethz.ch (mailto://ribadov@student.ethz.ch)).

1. READ THE TASK DESCRIPTION

2. SUBMIT SOLUTIONS

3. HAND IN FINAL SOLUTION

3. HANDIN CLOSED ON WEDNESDAY 24 APR 2024 00:02

HOW TO OBTAIN POINTS

To obtain points for this task, you have to **individually** hand in the task as follows:

- You need to select one of your group's submissions for grading. You will only be graded on that submissions.
- You have to write a short report on the approach that you have used. **Each student has to individually write their own report and you are not allowed to share the report with your other group members.**

If you do not properly hand in the task, you will receive zero points for the task.

Please double check that your handin was successful by refreshing the page after pressing the hand in button!

CURRENT STATUS

You have successfully handed in the task and it will be graded.

Submission selected for grading

results_task2_11.csv (First akima then pchip) with public score 0.983196857069963

Report

We started to solve the task independently, but later compared our solutions and combined the best aspects. In the end, we fine-tuned the code to improve our score significantly.

We started off by imputing missing data in the dataset, then splitting the data into x_train and y_train and used GPR to fit the function.

We tried out SimpleImputer and RBF as a kernel for GPR. This didn't perform so well, but was a good starting point. After looking up some documentation, we tried out KNN (k-nearest neighbor) from sklearn.Imputer in hopes for better results together with "kernel=Matern()".

The next step which proved crucial of finding the best combination of imputations and kernels was introducing cross-validation. We set it up by splitting x_train with the k-fold function and used the r2-score for validation. It was nice to compare the performance of

Preliminary grade

✔ Your submission is better than the baseline. Congratulations, you have passed the task. Your task grade: 6.

Note that the grade is preliminary. We will further assess your submission. In a few cases, we may change the grade for this task throughout the semester.

Grading details

Test set	Your submission's score	Baseline score	Pass
Public	0.983196857069963	0.9118206875861986	True
Private	0.9751058934080562	0.8989907956550156	True

NEW REPORT

Handin has closed on Wednesday 24 Apr 2024 00:02. We cannot accept late handins.