Exercise 3 - deadline 2.04.2021 23:59

This exercise is a continuation of the exercise 2. You should keep the same classifier and transformations as in the exercise 2. But simplify the manipulations using the Pipeline and ColumnTransformer classes. The goal is to simplify the execution of the machine learning process by using advanced and elegant methods.
The goals of the exercise:

1. Use a Pipeline for the transformation and model training.
2. Save the Pipeline (using pickle) into a file.
3. Create a second script that will load the Pipeline and use it to predict values from an input file, and save the predictions into a different file. Example:
   Let's say you have the input data weekly in the file adult_2021_cw_12.csv. This second script should read the input from this file and use the classifier to make predictions and write those predictions in the file adult_2021_cw_12_pred.csv .

The final submission should contain (at least) one script to contain all the goals mentioned before.

Optional goals:

1. Create an automated task that runs your prediction script weekly on monday.

References:
https://towardsdatascience.com/pipeline-columntransformer-and-featureunion-explained-f5491f815f

Important Note:
The submission should be done individually. Please name your script/notebook accordingly. At the beginning of your script / notebook give the name(s) of all students who worked on the exercise. You may work in small groups (of 2-3) but all students must be confident with the work of others. They should understand and be able to answer detailed questions of the implementation.