Deployment (anything REST + batch pipeline)

- Task description:
    1. Prepare model for deployment in two modes: online (as REST API) and batch (as scheduled pipeline)
    2. For REST use any tool you feel comfortable with (flask, TFServing, cloud helpers, MLFlow Models - anything that's REST)
    3. For batch use workflow manager and simple scheduler (cron)
    4. Batch and online prediction should use the same artifacts (model, transformers, etc.).
- Criteria:
    1. Model deployment is straightforward
    2. REST endpoint is stable and response time is manageable (<< 1 sec)
    3. Batch predictions: works.
    4. All code is packed as a python package
    5. Perform at least one test (for example, check input/output data or your code)
    6. *last task of batch pipeline producing a ready to use Docker image for online prediction.
- Materials:
    1. RestAPI:
        a. https://flask.palletsprojects.com/en/2.0.x/
        b. https://blog.keras.io/building-a-simple-keras-deep-learning-rest-api.html
        c. https://www.mlflow.org/docs/latest/models.html#deploy-mlflow-models
    2. Python packaging tutorials:
        a. https://packaging.python.org/tutorials/packaging-projects/
        b. https://python-packaging.readthedocs.io/en/latest/minimal.html
        c. https://python-packaging-tutorial.readthedocs.io/en/latest/setup_py.html
        d. https://blog.ionelmc.ro/2014/05/25/python-packaging/
    3. Testing:
        a. https://github.com/ericmjl/data-testing-tutorial
        b. https://docs.pytest.org/en/6.2.x/
        c. https://docs.python.org/3/library/unittest.html