

Exercise - Prototyping with Streamlit

Learning goal

- Develop skills in prototyping with Streamlit "by doing"

Instructions

- **Select a dataset, machine learning model or API that you have used in a previous course (including capstone or your thesis). Build a Streamlit app that showcases you the model can add value in a real application.**
- Add at least 3 widgets that have not been used in the last class. Remember checking the Streamlit API Reference.
- You should develop a Streamlit app that shows how the model *would be used to achieve a purpose*, not just an app that displays predictions (the main goal is learning Streamlit, but also try to be original with the use case).
- If you're short on ideas, work on the clustering example explained in Slide 38 of last lecture.
- The Streamlit app should be usable and also visually appealing, or at least well-organized (think both about interaction and layout widgets).

Exporting your model

You can use `joblib.dump` to save a model or pipeline trained in `sklearn`.

Deliverable

A submission link will be available in Moodle.

1. Submit all the files of your code, or a link to a your github repository where your files are (see instructions below).
2. Also submit a very short document indicating:
 - Which model did you choose, from which course, and why (1 sentence)
 - What is the utility of the prototype? (max 1 paragraph)
 - Main difficulties found? (max 1 paragraph)

3. Take a screen capture with [Microsoft Stream](#) showing how you launch the Streamlit app and demonstrating its use. Submit the link to the video.

Optional: Pushing the code to a repository

Instead of submitting the code you can practice adding the code to a repository:

- Create an empty repository **in the [organization]**(<https://github.com/data-driven-prototypes-2023>) (go to the organization, click on `Repositories` and then on `New Repository`.) Your repository should be named according to the template `s1_[name]_[surname]` .
- After creating the repository, git will provide some instructions on how to push your files. You can also follow [these instructions](#).
- To learn more about github, feel free to complete the [Github concepts](#) datacamp course.

Additional work

While this is not necessary, you can always follow the steps learned in the AWS course, try to run the Streamlit app in a EC2 AWS instance.