

# MLOPS Assignment

Patricia Llull Sperandio

# Steps

- Create a conda environment with python version 3.6 called MLOPS.
- Create an empty folder somewhere in your machine and initialize a Git repository.
- Within the MLOPS environment, create a simple Machine learning model based on a simple dataset. In this course we are not interested in the ML side of it so feel free to pick a simple one. You do not need to waste time in cleaning data, data preparation, etc if you don't want to.
- Commit your code to the master branch & push to your GitHub account (in order to do this, you will need to create a new repository on your GitHub account).
- Create a new branch called develop
- Add a simple feature to your code. (e.g. add regularization to your model, normalize the data, etc)
- Commit and push to your GitHub repository
- Merge master branch and develop branch
- Commit and push to your GitHub account

# Additional information

I added some steps such as creating a readme and .gitignore, as well as a metadata file (with flit init) and pre-commit configuration (black format test) to improve the structure and format of the code.

This is the link to the repo:

[https://github.com/patriciaallull/bike model](https://github.com/patriciaallull/bike_model)

The next slides are the screenshots with a short description.

## Create a conda environment with python version 3.6 called MLOPS

```
Last login: Thu May 21 14:40:13 on ttys000
(base) MacBook-Air-3:~ patricia.llullsperradio$ conda create -n MLOPS python=3.6
Collecting package metadata (current_repodata.json): done
Solving environment: done

## Package Plan ##

environment location: /Users/patricia.llullsperradio/opt/anaconda3/envs/MLOPS

added / updated specs:
- python=3.6
```

The following packages will be downloaded:

package	build	
certifi-2020.4.5.1	py36_0	155 KB
libcxx-10.0.0	1	760 KB
pip-20.0.2	py36_3	1.7 MB
python-3.6.10	hf48f09d_2	17.1 MB
setuptools-46.4.0	py36_0	513 KB
wheel-0.34.2	py36_0	50 KB
Total:		20.2 MB

The following NEW packages will be INSTALLED:

```
ca-certificates      pkgs/main/osx-64::ca-certificates-2020.1.1-0
certifi              pkgs/main/osx-64::certifi-2020.4.5.1-py36_0
libcxx               pkgs/main/osx-64::libcxx-10.0.0-1
libedit              pkgs/main/osx-64::libedit-3.1.20181209-hb402a30_0
libffi               pkgs/main/osx-64::libffi-3.3-h0a44026_1
ncurses              pkgs/main/osx-64::ncurses-6.2-h0a44026_1
openssl              pkgs/main/osx-64::openssl-1.1.1g-h1de35cc_0
pip                  pkgs/main/osx-64::pip-20.0.2-py36_3
python               pkgs/main/osx-64::python-3.6.10-hf48f09d_2
readline              pkgs/main/osx-64::readline-8.0-h1de35cc_0
setuptools            pkgs/main/osx-64::setuptools-46.4.0-py36_0
sqlite               pkgs/main/osx-64::sqlite-3.31.1-h5c1f38d_1
tk                   pkgs/main/osx-64::tk-8.6.8-ha441bb4_0
wheel                pkgs/main/osx-64::wheel-0.34.2-py36_0
xz                   pkgs/main/osx-64::xz-5.2.5-h1de35cc_0
zlib                 pkgs/main/osx-64::zlib-1.2.11-h1de35cc_3
```

# Accept and Install

```
Proceed ([y]/n)? y

Downloading and Extracting Packages
pip-20.0.2            | 1.7 MB    | #####| 100%
wheel-0.34.2           | 50 KB     | #####| 100%
setuptools-46.4.0      | 513 KB    | #####| 100%
certifi-2020.4.5.1     | 155 KB    | #####| 100%
python-3.6.10          | 17.1 MB   | #####| 100%
libcxx-10.0.0           | 760 KB    | #####| 100%
Preparing transaction: done
Verifying transaction: done
Executing transaction: done
#
# To activate this environment, use
#
#     $ conda activate MLOPS
#
# To deactivate an active environment, use
#
#     $ conda deactivate

(base) MacBook-Air-3:~ patricia@lullsperandio$
```

*Create an empty folder somewhere in your machine and initialize a Git repository.*

```
Last login: Mon May 25 14:12:49 on ttys000
(base) MacBook-Air-3:~ patricia.llull.sperandio$ cd Desktop
(base) MacBook-Air-3:Desktop patricia.llull.sperandio$ mkdir bike_model
(base) MacBook-Air-3:Desktop patricia.llull.sperandio$ cd bike_model
(base) MacBook-Air-3:bike_model patricia.llull.sperandio$ ls
(base) MacBook-Air-3:bike_model patricia.llull.sperandio$ git init
Initialized empty Git repository in /Users/patricia.llull.sperandio/Desktop/bike_model/.git/
(base) MacBook-Air-3:bike_model patricia.llull.sperandio$ █
```

# *Within the MLOPS environment, create a simple Machine learning model based on a simple dataset*

I used a model from a past assignment.

a- activate the mlops environment

```
(base) MacBook-Air-3:~ patriciallullsperandio$ conda info -e
# conda environments:
#
base                  * /Users/patriciallullsperandio/opt/anaconda3
MLOPS                /Users/patriciallullsperandio/opt/anaconda3/envs/MLOPS
nlp28                 /Users/patriciallullsperandio/opt/anaconda3/envs/nlp28

(base) MacBook-Air-3:~ patriciallullsperandio$ conda activate MLOPS
(MLOPS) MacBook-Air-3:~ patriciallullsperandio$ █
```

b- sample of installs required for the model: pandas, etc  
(next slides)

```
[MLOPS] MacBook-Air-3:~ patricia.llullsperandio$ conda install pandas
Collecting package metadata (current_repodata.json): done
Solving environment: done

## Package Plan ##

environment location: /Users/patricia.llullsperandio/opt/anaconda3/envs/MLOPS

added / updated specs:
- pandas

The following packages will be downloaded:



| package           | build          |        |
|-------------------|----------------|--------|
| mkl-service-2.3.0 | py36hfbe908c_0 | 202 KB |
| mkl_fft-1.0.15    | py36h5e564d8_0 | 139 KB |
| mkl_random-1.1.0  | py36ha771720_0 | 287 KB |
| numpy-1.18.1      | py36h7241aed_0 | 5 KB   |
| numpy-base-1.18.1 | py36h3304bdc_1 | 4.0 MB |
| pandas-1.0.3      | py36h6c726b0_0 | 7.9 MB |
| pytz-2020.1       | py_0           | 184 KB |


Total: 12.6 MB

The following NEW packages will be INSTALLED:

blas          pkgs/main/osx-64::blas-1.0-mkl
intel-openmp   pkgs/main/osx-64::intel-openmp-2019.4-233
libgfortran    pkgs/main/osx-64::libgfortran-3.0.1-h93005f0_2
mkl           pkgs/main/osx-64::mkl-2019.4-233
mkl-service    pkgs/main/osx-64::mkl-service-2.3.0-py36hfbe908c_0
mkl_fft        pkgs/main/osx-64::mkl_fft-1.0.15-py36h5e564d8_0
mkl_random     pkgs/main/osx-64::mkl_random-1.1.0-py36ha771720_0
numpy          pkgs/main/osx-64::numpy-1.18.1-py36h7241aed_0
numpy-base     pkgs/main/osx-64::numpy-base-1.18.1-py36h3304bdc_1
pandas         pkgs/main/osx-64::pandas-1.0.3-py36h6c726b0_0
pytz           pkgs/main/noarch::pytz-2020.1-py_0

Proceed ([y]/n)? y

Downloading and Extracting Packages
numpy-1.18.1      | 5 KB      | #####| 100%
pandas-1.0.3       | 7.9 MB    | #####| 100%
pytz-2020.1        | 184 KB    | #####| 100%
mkl-service-2.3.0   | 202 KB    | #####| 100%
numpy-base-1.18.1   | 4.0 MB    | #####| 100%
mkl_random-1.1.0    | 287 KB    | #####| 100%
mkl_fft-1.0.15      | 139 KB    | #####| 100%
Preparing transaction: done
Verifying transaction: done
Executing transaction: done
```

# Numpy already installed since I installed pandas

```
[(MLOPS) MacBook-Air-3:~ patricia.llullsperandio$ python --version
Python 3.6.10 :: Anaconda, Inc.
[(MLOPS) MacBook-Air-3:~ patricia.llullsperandio$ conda install numpy
Collecting package metadata (current_repodata.json): done
Solving environment: done

# All requested packages already installed.

(MLOPS) MacBook-Air-3:~ patricia.llullsperandio$ ]
```

# Readme and .gitignore

```
(base) MacBook-Air-3:bike_model patricia.llullsperandio$ conda activate MLOPS
[(MLOPS) MacBook-Air-3:bike_model patricia.llulllsp[redacted]erandio$ nano README.md
[(MLOPS) MacBook-Air-3:bike_model patricia.llulllsp[redacted]erandio$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    README.md

nothing added to commit but untracked files present (use "git add" to track)
(MLOPS) MacBook-Air-3:bike_model patricia.llulllsp[redacted]erandio$ git add .
[(MLOPS) MacBook-Air-3:bike_model patricia.llulllsp[redacted]erandio$ git commit -m "Initial commit"
[[master (root-commit) 5a92554] Initial commit
  1 file changed, 8 insertions(+)
  create mode 100644 README.md
(MLOPS) MacBook-Air-3:bike_model patricia.llulllsp[redacted]erandio$ git status
On branch master
[nothing to commit, working tree clean
(MLOPS) MacBook-Air-3:bike_model patricia.llulllsp[redacted]erandio$ █
```

```
[(MLOPS) MacBook-Air-3:bike_model patricia.llulllsp[redacted]erandio$ nano .gitignore
[(MLOPS) MacBook-Air-3:bike_model patricia.llulllsp[redacted]erandio$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    .gitignore

nothing added to commit but untracked files present (use "git add" to track)
[(MLOPS) MacBook-Air-3:bike_model patricia.llulllsp[redacted]erandio$ git add .
[(MLOPS) MacBook-Air-3:bike_model patricia.llulllsp[redacted]erandio$ git commit -m "added gitignore file"
[[master 3bb41ad] added gitignore file
  1 file changed, 152 insertions(+)
  create mode 100644 .gitignore
(MLOPS) MacBook-Air-3:bike_model patricia.llulllsp[redacted]erandio$ git status
On branch master
nothing to commit, working tree clean
(MLOPS) MacBook-Air-3:bike_model patricia.llulllsp[redacted]erandio$ █
```

# Flit init (metadata)

```
(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ flit init
Module name: bike_model
Author [patil]: patricia llull sperandio
Author email [patricia.llull@gmail.com]: patricia.llull@gmail.com
Home page:
Choose a license (see http://choosealicense.com/ for more info)
1. MIT - simple and permissive
2. Apache - explicitly grants patent rights
3. GPL - ensures that code based on this is shared with the same terms
4. Skip - choose a license later
Enter 1-4 [4]: 4

Written pyproject.toml; edit that file to add optional extra info.
(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ git add .
(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ git commit -m "added toml file"
[master 923137e] added toml file
 1 file changed, 9 insertions(+)
  create mode 100644 pyproject.toml
(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ git status
On branch master
nothing to commit, working tree clean
(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$
```

# Requirements.txt

To make sure a user can install all necessary packages to run the model

```
(MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$ pip freeze > requirements.txt
(MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    requirements.txt

nothing added to commit but untracked files present (use "git add" to track)
(MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$ git add .
(MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$ git commit -m "added requirements file"
[master c718559] added requirements file
 1 file changed, 74 insertions(+)
 create mode 100644 requirements.txt
(MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$
```

# Pre-commit configuration

```
(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ nano .pre-commit-config.yaml
(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    .pre-commit-config.yaml

nothing added to commit but untracked files present (use "git add" to track)
(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ git add .
(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ git commit -m "added config.yaml file"
[master a62c497] added config.yaml file
 1 file changed, 11 insertions(+)
   create mode 100644 .pre-commit-config.yaml
(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ pre-commit install
pre-commit installed at .git/hooks/pre-commit
(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ █
```

# Content of pre-commit configuration

```
[(MLOPS) MacBook-Air-3:bike_model patricia.llull.sperandio$ ls -a
.
..
.git
.gitignore
.bike_model_v0.py
hour.csv
[(MLOPS) MacBook-Air-3:bike_model patricia.llull.sperandio$ atom .pre-commit-config]
.yaml
(MLOPS) MacBook-Air-3:bike_model patricia.llull.sperandio$ ]
```

```
.pre-commit-config.yaml
```

```
1 repos:
2   - repo: https://github.com/pre-commit/pre-commit-hooks
3     rev: v2.3.0
4     hooks:
5       - id: check-yaml
6       - id: end-of-file-fixer
7       - id: trailing whitespace
8   - repo: https://github.com/psf/black
9     rev: 19.3b0
10    hooks:
11      - id: black
12
```

# Adding csv file

I add the csv that is necessary to train the model

```
[(MLOPS) MacBook-Air-3:Desktop patriciallullsperandio$ cd bike_model
[(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ ls
README.md          hour.csv          pyproject.toml      requirements.txt
[(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    hour.csv

nothing added to commit but untracked files present (use "git add" to track)
[(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ git add .
[(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ git commit -m "added data file"
[INFO] Installing environment for https://github.com/pre-commit/pre-commit-hooks.
[INFO] Once installed this environment will be reused.
[INFO] This may take a few minutes...
Check Yaml.....(no files to check)Skipped
Fix End of Files.....Passed
Trim Trailing Whitespace.....Passed
black.....(no files to check)Skipped
[master f2b909f] added data file
 1 file changed, 17380 insertions(+)
 create mode 100755 hour.csv
[(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$ ]
```

# Adding the code file

The code contains a function to train and save a model.

```
((MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$ cd ..  
((MLOPS) MacBook-Air-3:Desktop patricia.lullsperandio$ mv bike_model_v0.py bike_model  
((MLOPS) MacBook-Air-3:Desktop patricia.lullsperandio$ cd bike_model  
((MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$ git status  
On branch master  
Untracked files:  
  (use "git add <file>..." to include in what will be committed)  
    bike_model_v0.py  
  
nothing added to commit but untracked files present (use "git add" to track)  
((MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$ git add .  
((MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$ git commit -m "added code file"  
Check Yaml.....(no files to check)Skipped  
Fix End of Files.....Passed  
Trim Trailing Whitespace.....Passed  
black.....Passed  
[master 31b1021] added code file  
 1 file changed, 125 insertions(+)  
 create mode 100644 bike_model_v0.py  
(MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$ █
```

# Creating GitHub repo

I used ‘hub’ to create that directory as a repo on GitHub and pushed the contents of the current branch.

```
[(MLOPS) MacBook-Air-3:bike_model patricia.llullsperandio$ hub create
Updating origin
https://github.com/patricia.llull/bike_model
[(MLOPS) MacBook-Air-3:bike_model patricia.llullsperandio$ git push -u origin HEAD
Enumerating objects: 21, done.
Counting objects: 100% (21/21), done.
Delta compression using up to 4 threads
Compressing objects: 100% (20/20), done.
Writing objects: 100% (21/21), 261.71 KiB | 2.04 MiB/s, done.
Total 21 (delta 5), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (5/5), done.
To https://github.com/patricia.llull/bike_model.git
 * [new branch]      HEAD -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
[(MLOPS) MacBook-Air-3:bike_model patricia.llullsperandio$ git branch
* master
(MLOPS) MacBook-Air-3:bike_model patricia.llullsperandio$ ]
```

# Result on GitHub website

 [patriciaillull / bike\\_model](#) Unwatch ▾ 1 Star 0 Fork 0

Code Issues 0 Pull requests 0 Actions Projects 0 Wiki Security 0 Insights Settings

No description, website, or topics provided. Edit

Manage topics

7 commits 1 branch 0 packages 0 releases 1 contributor

Branch: master ▾ New pull request Create new file Upload files Find file Clone or download ▾

patriciaillull added code file	Latest commit 31b1021 5 minutes ago
<a href="#">.gitignore</a>	added gitignore file 15 minutes ago
<a href="#">.pre-commit-config.yaml</a>	added config.yaml file 9 minutes ago
<a href="#">README.md</a>	Initial commit 17 minutes ago
<a href="#">bike_model_v0.py</a>	added code file 5 minutes ago
<a href="#">hour.csv</a>	added data file 6 minutes ago
<a href="#">pyproject.toml</a>	added toml file 13 minutes ago
<a href="#">requirements.txt</a>	added requirements file 11 minutes ago

[README.md](#) edit

Predicting bike rentals in Madrid The goal is to develop an algorithm that can predict how many bikes will be rented on a specific day, under given weather conditions.

# Branch ‘develop’

```
[(MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$ git branch
* master
[(MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$ git checkout -b develop
Switched to a new branch 'develop'
[(MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$ git branch
* develop
  master
[(MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$ ls
README.md          hour.csv           requirements.txt
bike_model_v0.py    pyproject.toml
(MLOPS) MacBook-Air-3:bike_model patricia.lullsperandio$ ]
```

I switched to the develop branch, made changes to the code on atom after doing Parameter optimisation with grid search. Now the RF uses the best parameters. I saved the changes (see next two slides).

```
[(MLOPS) MacBook-Air-3:bike_model patricia.llull.sperandio$ git status
On branch develop
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
    modified:   bike_model_v0.py
```

```
no changes added to commit (use "git add" and/or "git commit -a")
```

```
[(MLOPS) MacBook-Air-3:bike_model patricia.llull.sperandio$ git branch
```

```
* develop
  master
```

```
[(MLOPS) MacBook-Air-3:bike_model patricia.llull.sperandio$ git add .
```

```
[(MLOPS) MacBook-Air-3:bike_model patricia.llull.sperandio$ git commit -m "added gr]
id search and parameter optimisation to random forest"
```

```
Check Yaml.....(no files to check)Skipped
```

```
Fix End of Files.....Passed
```

```
Trim Trailing Whitespace.....Passed
```

```
black.....Failed
```

```
- hook id: black
```

```
- files were modified by this hook
```

```
reformatted bike_model_v0.py
```

```
All done! ✨🍰✨
```

```
1 file reformatted.
```

```
[(MLOPS) MacBook-Air-3:bike_model patricia.llull.sperandio$ git add .
```

```
[(MLOPS) MacBook-Air-3:bike_model patricia.llull.sperandio$ git commit -m "balck fo]
rmat"
```

```
Check Yaml.....(no files to check)Skipped
```

```
Fix End of Files.....Passed
```

```
Trim Trailing Whitespace.....Passed
```

```
black.....Passed
```

```
[develop 72e4a8a] balck format
```

```
 1 file changed, 26 insertions(+), 2 deletions(-)
```

```
[(MLOPS) MacBook-Air-3:bike_model patricia.llull.sperandio$
```

# Push develop branch

```
(MLOPS) MacBook-Air-3:bike_model patricia.llull.sperandio$ git status
On branch develop
nothing to commit, working tree clean
(MLOPS) MacBook-Air-3:bike_model patricia.llull.sperandio$ git push
fatal: The current branch develop has no upstream branch.
To push the current branch and set the remote as upstream, use

    git push --set-upstream origin develop

(MLOPS) MacBook-Air-3:bike_model patricia.llull.sperandio$ git push -u origin HEAD
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 617 bytes | 617.00 KiB/s, done.
Total 3 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
remote:
remote: Create a pull request for 'develop' on GitHub by visiting:
remote:     https://github.com/patricia.llull/bike_model/pull/new/develop
remote:
To https://github.com/patricia.llull/bike_model.git
 * [new branch]      HEAD -> develop
Branch 'develop' set up to track remote branch 'develop' from 'origin'.
(MLOPS) MacBook-Air-3:bike_model patricia.llull.sperandio$
```

# Git diff

```
diff --git a/bike_model_v0.py b/bike_model_v0.py
index 43090f9..2128130 100644
--- a/bike_model_v0.py
+++ b/bike_model_v0.py
@@ -7,6 +7,7 @@ import pathlib
 from pathlib import Path
 import os.path
 from os import path
+from sklearn.model_selection import GridSearchCV

 # Load the data
@@ -93,8 +94,31 @@ def train_and_persist(hour):
     test_y = test["cnt"]
     # return train_X, train_y, test_X, test_y
     # RANDOM FOREST
-    # separate_x_y(hour)
-    rf = RandomForestRegressor(n_estimators=50, random_state=42)
+    # Grid search
+
+    # gsc = GridSearchCV(
+    #     estimator=RandomForestRegressor(),
+    #     param_grid={ 'max_depth': [10, 40, ],
+    #                 'min_samples_leaf': [1, 2],
+    #                 'min_samples_split': [2, 5],
+    #                 'n_estimators': [200, 400]},
+    #     cv=5,
+    #     scoring="r2",
+    #     verbose=10,
+    #     n_jobs=4,
+    # )
+
+    # grid_result = gsc.fit(train_X, train_y)
+
+    # gsc.best_params_
+
+    rf = RandomForestRegressor(
+        max_depth=40,
+        min_samples_leaf=1,
+        min_samples_split=2,
+        n_estimators=200,
+        random_state=42,
+    )
+    rf.fit(train_X, train_y)
    result = rf.predict(test_X)
```

# Merge to master

```
(MLOPS) MacBook-Air-3:bike_model patricia.llullsperandio$ git branch
  develop
* master
(MLOPS) MacBook-Air-3:bike_model patricia.llullsperandio$ git merge develop
Updating 31b1021..72e4a8a
Fast-forward
  bike_model_v0.py | 28 ++++++-----+
  1 file changed, 26 insertions(+), 2 deletions(-)
(MLOPS) MacBook-Air-3:bike_model patricia.llullsperandio$ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
```

# Sample from git log

```
....skipping...
commit 72e4a8a9a38fcb0ef10261a843a2501a4f287c29 (HEAD -> master, origin/master, origin/develop, develop)
Author: patriciallull <patricia.llull@gmail.com>
Date: Mon May 25 14:49:58 2020 +0200

    balck format

commit 31b1021cd76d21ad08fdabb8b1215976d65bd24
Author: patriciallull <patricia.llull@gmail.com>
Date: Mon May 25 14:36:27 2020 +0200

    added code file

commit f2b909fd1c39a0b7540aef6bb4e8846ff20d25eb
Author: patriciallull <patricia.llull@gmail.com>
Date: Mon May 25 14:34:57 2020 +0200

    added data file

commit a62c497e5abc6a882dca6fcc8b3efccb8f3409c0
Author: patriciallull <patricia.llull@gmail.com>
Date: Mon May 25 14:32:00 2020 +0200

    added config.yaml file

commit c718559a63024d9563b577b41a114ce0c56bbaca
Author: patriciallull <patricia.llull@gmail.com>
Date: Mon May 25 14:30:01 2020 +0200

    added requirements file

commit 923137e42ba340296d3751918fcc7367159046d9
Author: patriciallull <patricia.llull@gmail.com>
Date: Mon May 25 14:28:30 2020 +0200

    added toml file

commit 3bb41ade76500718244434bc45bffa9f0654b251
Author: patriciallull <patricia.llull@gmail.com>
Date: Mon May 25 14:26:23 2020 +0200

    added gitignore file

commit 5a92554df2c4d16d86e3b73950cf35d31ffe39d3
Author: patriciallull <patricia.llull@gmail.com>
Date: Mon May 25 14:24:37 2020 +0200

Initial commit
(MLOPS) MacBook-Air-3:bike_model patriciallullsperandio$
```

# Final repo – 2 branches

MLOPS assignment

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8 commits

2 branches

0 packages

0 releases

1 contributor

Branch: master ▾

New pull request

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patriciaallull balck format

Latest commit 72e4a8a 4 days ago

.gitignore

added gitignore file

4 days ago

.pre-commit-config.yaml

added config.yaml file

4 days ago

README.md

Initial commit

4 days ago

bike\_model\_v0.py

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4 days ago

hour.csv

added data file

4 days ago

pyproject.toml

added toml file

4 days ago

requirements.txt

added requirements file

4 days ago

# History of code file

History for [bike\\_model](#) / `bike_model_v0.py`

Commits on May 25, 2020

**balck format**

 patriciaillull committed 4 days ago

 [72e4a8a](#) 

**added code file**

 patriciaillull committed 4 days ago

 [31b1021](#) 