

MLOPS Individual Assignment

MLOPS



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# Assignment Description

Create a text document (word or similar) with all the steps and add screenshots of all the actions requested below. Make sure you have a public repo on GitHub that I can see and provide the address in your response.

If I am not confident that you know what you are doing, I may clone your repository to my machine and examine your steps.

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

If you have a question, you can ask me. However, part of the exercise is that you can find the missing information on your own. For that reason, I will not directly answer your questions, but I will try to point you in the right direction. These are basic operations hence a simple Google search should solve most of your problems.

Remember that cheating will not be tolerated. The internet is big enough for each of you to find an individual solution to this assignment.

# Solution

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

**$ conda create -n MLOPS python=3.6**

A screenshot of a cell phone

Description automatically generated

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

**$ mkdir MLOPS**

**$ cd MLOPS/**

**$ git init**

**$ vim .gitignore**

**$ git add .gitignore**

**$ git commit -m "initiate MLOPS Individual assignment”**

**$ hub create**

A picture containing sitting, green

Description automatically generated

## 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.

-Adding BikeModel

A screenshot of a computer

Description automatically generated

* Installing required packages in MLOPS environment

**$ conda install pandas**

**$ conda install numpy**

**$ conda install statsmodels**

**$ conda install scikit-learn**

A close up of a black background

Description automatically generated

* Testing if the model works inside the current environment MLOPS

A screenshot of a cell phone

Description automatically generated

## 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).

**$ git add .**

**$ git commit -m "adding bike machine learning model to predict # users renting bike"**

**$ git push origin master**

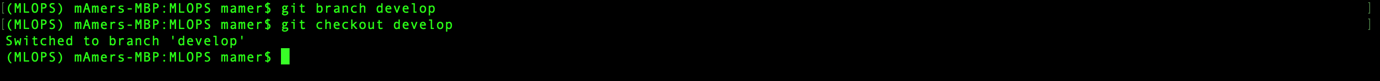
A picture containing holding, black, green

Description automatically generated

## Create a new branch called develop

**$ git branch develop**

**$ git checkout develop**



## Add a simple feature to your code. (e.g. add regularization to your model, normalize the data, etc.)

* Adding a pipline to normalize my data

rf\_pipeline = Pipeline([('norm', MinMaxScaler()),('classify', RandomForestRegressor(

max\_depth=40,

min\_samples\_leaf=1,

min\_samples\_split=2,

n\_estimators=200,

random\_state=42,

)),])

rf\_pipeline.fit(train\_X, train\_y)

A screenshot of a computer

Description automatically generated

## Commit and push to your GitHub repository

**$ git add .**

**$ git commit -m "adding new pipline to normalize the data using MinMaxScalar function"**

**$ git push origin develop**

A screenshot of a computer

Description automatically generated

## Merge master branch and develop branch

**$ git checkout master**

**$ git merge develop**

**$ git log --oneline**

A picture containing clock

Description automatically generated

## Commit and push to your GitHub account

**$ git push origin master**

**$ git log –oneline**

