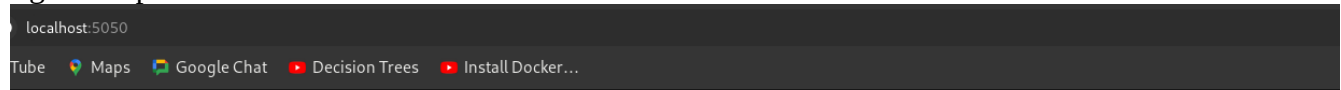


- git clone [git@github.com:trungphap/innovant.git](https://github.com/trungphap/innovant.git)
- cd innovant
- vagrant up
- vagrant ssh
- cd /vagrant
- docker-compose up -d

In the browser of the host :

- go to <http://localhost:5050> : there is no result



Breast Cancer Analysis Result

Correlation between attributs



Distribution of attribut 1



Distribution of attribut 2



Distribution of attribut 5




Distribution of attribut 6



- go to <http://localhost:8899>

localhost:8899/login?next=%2Ftree%3F

es gmail.com Paris 8 Ent Pari1 Yahoo Mail IED Contacts AI Cours bdd/insert_movies.py VS Code jupyter neural network us



Password or token:

Log in

Token authentication is enabled

If no password has been configured, you need to open the server with its login token in the URL, or paste it above. This requirement will be lifted if you [enable a password](#).

The command:

```
jupyter server list
```

will show you the URLs of running servers with their tokens, which you can copy and paste into your browser. For example:

```
Currently running servers:
http://localhost:8888/?token=c8de56fa... :: /Users/you/notebooks
```

or you can paste just the token value into the password field on this page.

See [the documentation on how to enable a password](#) in place of token authentication, if you would like to avoid dealing with random tokens.

Cookies are required for authenticated access to the Jupyter server.

Setup a Password

You can also setup a password by entering your token and a new password on the fields below:

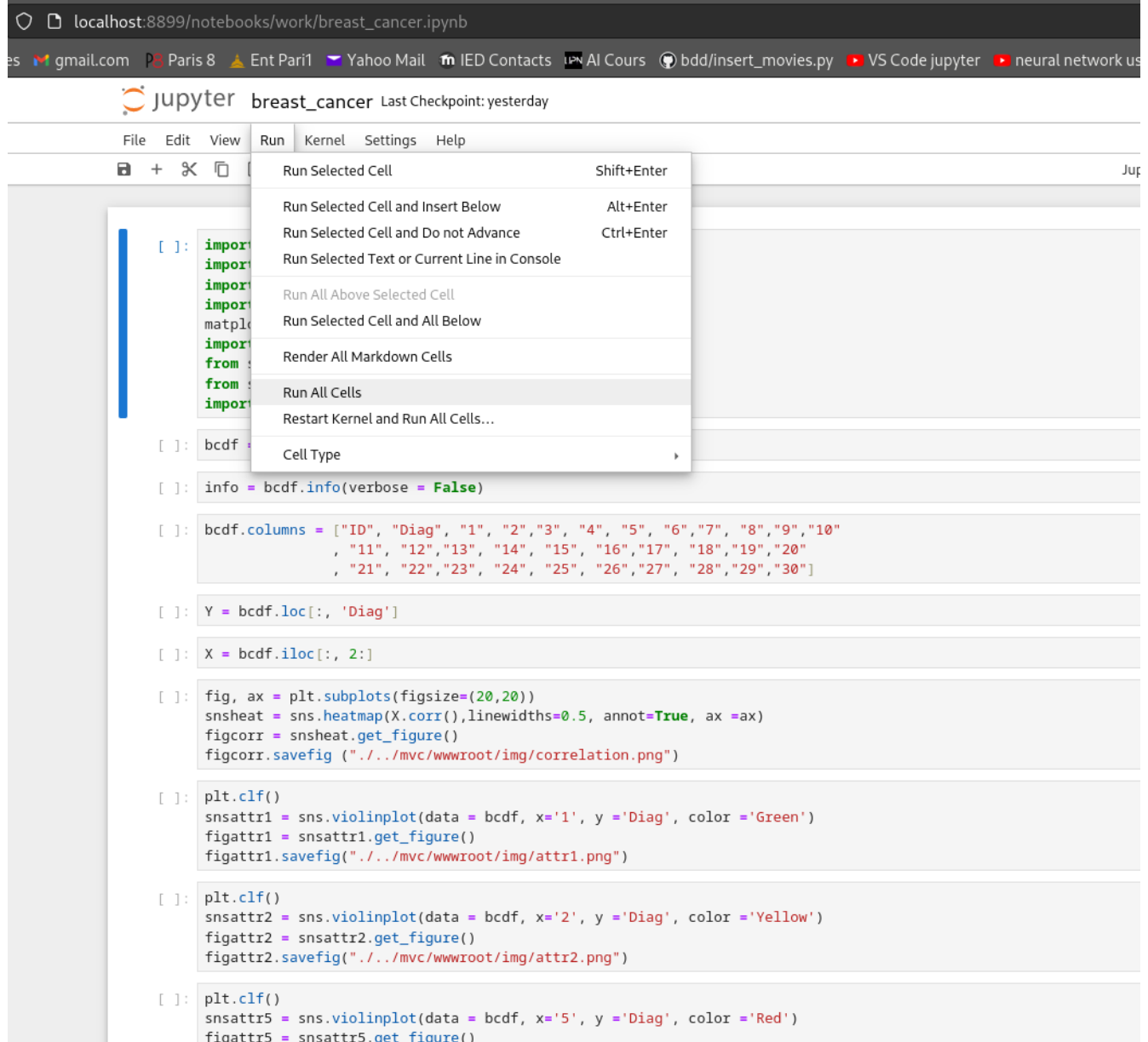
Token

New Password

Log in and set new password

- enter password in the case Password or token, then login

- click on work, click on breast_cancer.ipynb, click Run, Run All cells



The screenshot shows a web browser at localhost:8899/notebooks/work/breast_cancer.ipynb. The Jupyter Notebook interface is open, displaying a notebook titled 'breast_cancer' with a last checkpoint from yesterday. The 'Run' menu is open, showing options like 'Run Selected Cell', 'Run All Cells', and 'Restart Kernel and Run All Cells...'. The 'Run All Cells' option is highlighted. The notebook content includes several code cells for data analysis and visualization.

```
[ ]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from sklearn.preprocessing import StandardScaler
from sklearn.metrics import confusion_matrix
import seaborn as sns

[ ]: bcdf = pd.read_csv('breast_cancer.csv')

[ ]: info = bcdf.info(verbose = False)

[ ]: bcdf.columns = ["ID", "Diag", "1", "2", "3", "4", "5", "6", "7", "8", "9", "10",
                  "11", "12", "13", "14", "15", "16", "17", "18", "19", "20",
                  "21", "22", "23", "24", "25", "26", "27", "28", "29", "30"]

[ ]: Y = bcdf.loc[:, 'Diag']

[ ]: X = bcdf.iloc[:, 2:]

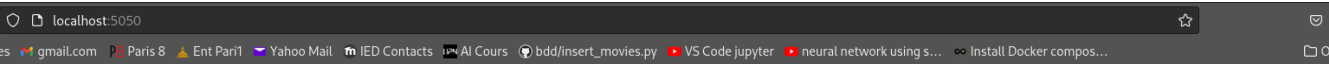
[ ]: fig, ax = plt.subplots(figsize=(20,20))
snsheat = sns.heatmap(X.corr(),linewidths=0.5, annot=True, ax =ax)
figcorr = snsheat.get_figure()
figcorr.savefig("../mvc/wwwroot/img/correlation.png")

[ ]: plt.clf()
snsattr1 = sns.violinplot(data = bcdf, x='1', y = 'Diag', color = 'Green')
figattr1 = snsattr1.get_figure()
figattr1.savefig("../mvc/wwwroot/img/attr1.png")

[ ]: plt.clf()
snsattr2 = sns.violinplot(data = bcdf, x='2', y = 'Diag', color = 'Yellow')
figattr2 = snsattr2.get_figure()
figattr2.savefig("../mvc/wwwroot/img/attr2.png")

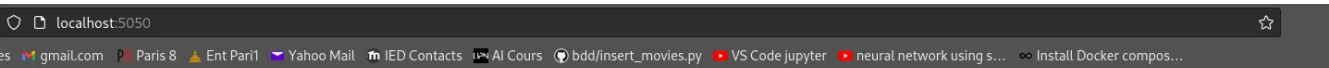
[ ]: plt.clf()
snsattr5 = sns.violinplot(data = bcdf, x='5', y = 'Diag', color = 'Red')
figattr5 = snsattr5.get_figure()
```

- go to <http://localhost:5050> : there is result, example

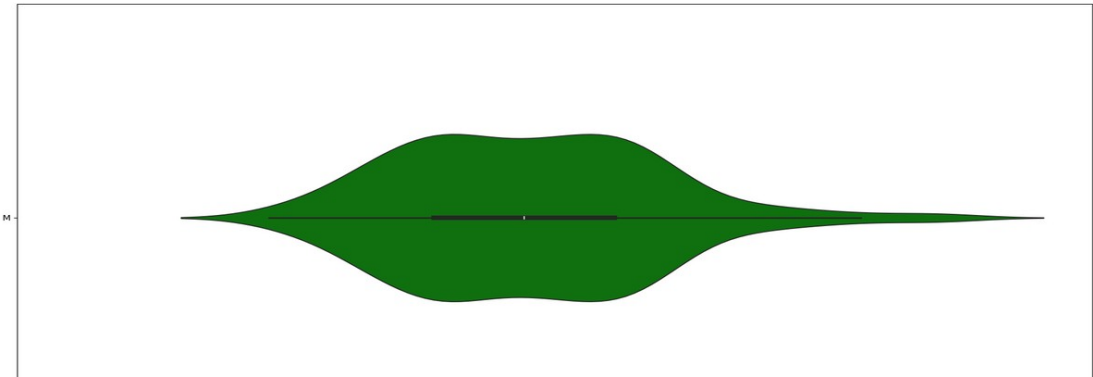


Breast Cancer Analysis Result

Correlation between attributs



Distribution of attribut 1



Classification Report for Decision_Tree_1

	Precision	Recall	F1 Score	Support
Malignant	0.95	0.94	0.95	121
Benign	0.9	0.91	0.9	67
Accuracy			0.9	
Macro Avg	0.92	0.93	0.92	188
Weighted Avg	0.93	0.93	0.93	188

Classification Report for Decision_Tree_2

	Precision	Recall	F1 Score	Support
Malignant	0.93	0.93	0.93	121
Benign	0.88	0.88	0.88	67
Accuracy			0.88	
Macro Avg	0.91	0.91	0.91	188
Weighted Avg	0.91	0.91	0.91	188