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Carnet 201229730

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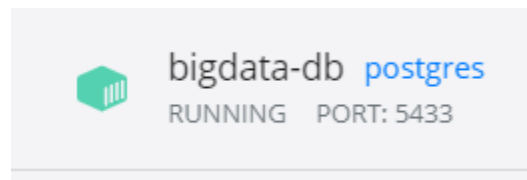
## Modo de ejecución del código (Windows Terminal)

### Creación de imagen/contenedor de la base de datos

Para la creación de la base de datos ejecute el siguiente código en la terminal

```
1. docker rm bigdata-db
2. docker run --name bigdata-db ^
3.   -e POSTGRES_PASSWORD=testPassword ^
4.   -p 5433:5432 ^
5.   -d postgres
```

Si la creación de la base de datos fue exitosa, debería observarse un Container de Docker corriendo la base de datos llamada postgres



### Creación del contenedor principal – Ubicación del Jupyter Notebook

1.Descomprima el archivo .zip/.rar en una carpeta de su preferencia.

2.Abra la terminal de comandos de Windows

3.En terminal, diríjase a la carpeta que fue descomprimida. En mi caso esto lo logro mediante el comando

```
1. cd C:\Users\steve\OneDrive\004BigData\Tarea3
```

4.Para crear la imagen en Docker, ejecute el siguiente comando

```
1. docker build --tag bigdata .
```

5.Para ejecutar/correr el contenedor, ejecute el siguiente comando

```
1. docker run -p 8888:8888 -i -t bigdata /bin/bash
```

Lo esperado es que el contenedor inicie de manera correcta, y espere instrucciones en modo IDLE:

```
1. bash-5.0#
```

6. Inicie la sesión del jupyter notebook con el script

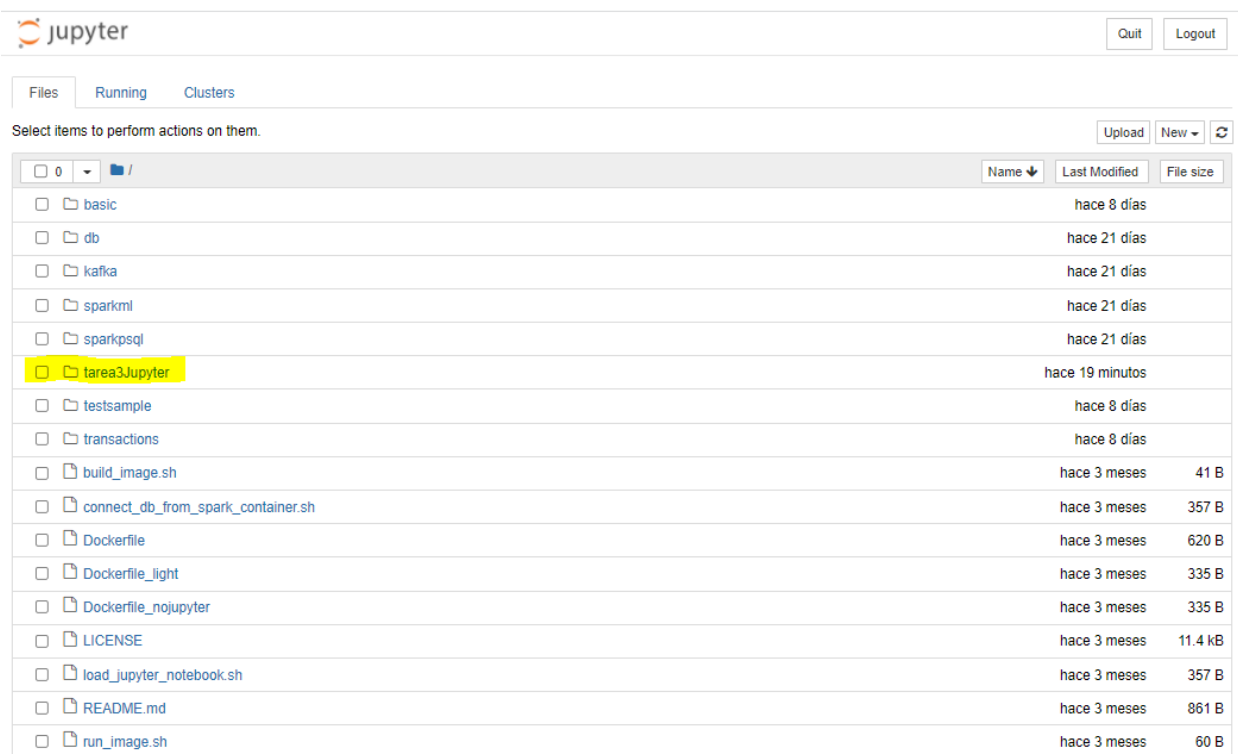
```
1. ./load_jupyter_notebook.sh
```

7. Copie y pegue el link mostrado en la terminal, en la barra de búsqueda del browser compatible con Jupyter notebook. (En mi caso utilizo Google Chrome).

```
[W 02:14:31.664 NotebookApp] No web browser found: could not locate runnable browser.
[C 02:14:31.664 NotebookApp]

To access the notebook, open this file in a browser:
file:///root/.local/share/jupyter/runtime/nbserver-10-open.html
Or copy and paste one of these URLs:
http://3033c8a98e3c:8888/?token=bbd335e31c3f78b6330f89aa6753fc3c14c15bcc2df83b9f
→ or http://127.0.0.1:8888/?token=bbd335e31c3f78b6330f89aa6753fc3c14c15bcc2df83b9f
```

8. Si la sesión de Jupyter inició de manera correcta, debería observar lo siguiente en la pantalla del buscador.



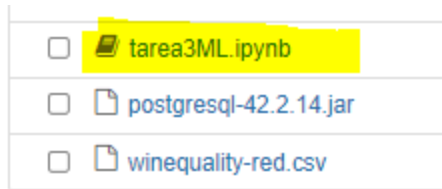
The screenshot shows the Jupyter Notebook interface. At the top, there's a 'Jupyter' logo and 'Quit' and 'Logout' buttons. Below that, there are tabs for 'Files', 'Running', and 'Clusters'. A message says 'Select items to perform actions on them.' with 'Upload', 'New', and a refresh icon. The main area is a file browser showing a list of files and folders. The 'tarea3Jupyter' folder is highlighted in yellow. The list includes folders like 'basic', 'db', 'kafka', 'sparkml', 'sparkpsql', 'testsample', 'transactions' and files like 'build\_image.sh', 'connect\_db\_from\_spark\_container.sh', 'Dockerfile', 'Dockerfile\_light', 'Dockerfile\_nojupyter', 'LICENSE', 'load\_jupyter\_notebook.sh', 'README.md', and 'run\_image.sh'.

Name	Last Modified	File size
basic	hace 8 días	
db	hace 21 días	
kafka	hace 21 días	
sparkml	hace 21 días	
sparkpsql	hace 21 días	
tarea3Jupyter	hace 19 minutos	
testsample	hace 8 días	
transactions	hace 8 días	
build_image.sh	hace 3 meses	41 B
connect_db_from_spark_container.sh	hace 3 meses	357 B
Dockerfile	hace 3 meses	620 B
Dockerfile_light	hace 3 meses	335 B
Dockerfile_nojupyter	hace 3 meses	335 B
LICENSE	hace 3 meses	11.4 kB
load_jupyter_notebook.sh	hace 3 meses	357 B
README.md	hace 3 meses	861 B
run_image.sh	hace 3 meses	60 B

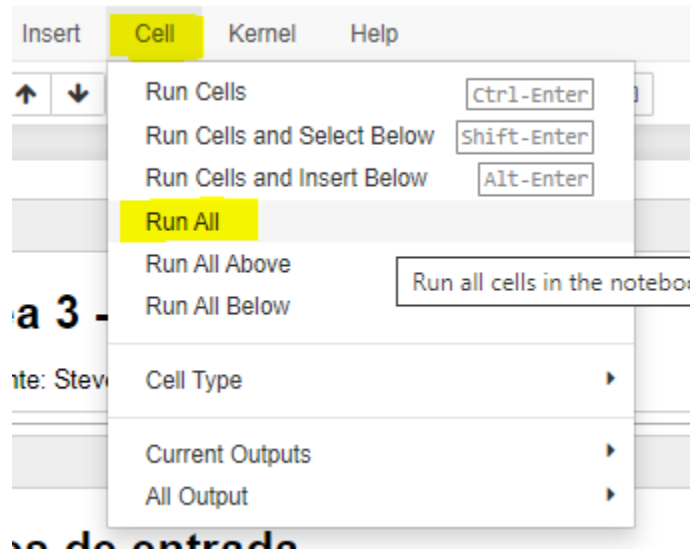
9. Ingrese en la carpeta tarea3Jupyter

```
□ □ tarea3Jupyter
```

10. Seleccione el document tarea3ML.ipynb



## 11. Ejecute el documento tarea3ML.ipynb, Cell>Run All



## Evidencia de escritura a tabla “tarea3”

Data Output														Explain	Messages	Notifications
	free_sulfur_dioxide double precision	volatile_acid_dioxide double precision	chitic_acid_dioxide double precision	residual_sugar double precision	chlorides double precision	free_sulfur_dioxide double precision	total_sulfur_dioxide double precision	density double precision	pH double precision	sulphates double precision	alcohol double precision	BinaryQuality integer				
1	4.250195706522404	3.90910549043959	0	1.3475864700543726	1.6147776501679734	1.0516094578454602	1.033581535954439	528.681902902932	22.735153833991657	3.3036987733010235	8.820761504486935	0				
2	4.479936066796556	4.9145611900148259	0	1.8440565135161	2.082213298240522	2.3900214951033187	2.036763614969041	528.1520621530078	20.272206139754976	4.0116342498394815	9.19611361004656	0				
3	4.479936066796556	4.244394329412059	0.2053376055640616	1.631288871441781	1.9547309063309342	1.43401289706119912	1.6415706747511676	528.2580176704421	21.115840878462943	3.834650204887197	9.19611361004656	0				
4	6.432728444448239	1.5637242329051651	2.87472655491083	1.3475864700543726	1.3475864700543726	1.3475864700543726	1.6252146166702566	1.8239614163901862	528.7878900017428	20.46811631395633	3.4216879021789866	9.19611361004656	1			
5	4.250195706522404	3.90910549043959	0	1.3475864700543726	1.6147776501679734	1.0516094578454602	1.033581535954439	528.681902902932	22.735153833991657	3.3036987733010235	8.820761504486935	0				
6	4.250195706522404	3.889215840491002	0	1.2766608485587901	1.5935306903850721	1.2428111774537256	1.2159782775934573	528.681902902932	22.735153833991657	3.3036987733010235	8.820761504486935	0				
7	4.537371088397272	3.350837803681002	0.30800640834609244	1.1348096901355436	1.4660481401724392	1.43401289706119912	1.7935679594503497	527.9401195367628	21.37493070425159	2.7137526014581987	8.820761504486935	0				
8	4.1927606849217876	3.6300740099245727	0	0.851107288739135	1.3810598261316199	1.43401289706119912	0.6388885957365651	526.9683935543485	21.95788435659572	2.7727471658971803	9.383789215372433	1				
9	4.479936066796556	3.2391429883077985	0.1026688027820308	1.418512091531952	1.5510364542131796	0.8604077382371946	0.50471902249170558	528.1520621530078	21.76356544294956	3.36269337740005	8.914399754603811	1				
10	4.30763072812302	2.79236472544223	1.8480385648178856	4.326461811532526	1.508542376344332	1.6252146166702566	3.1007446078633163	528.681902902932	21.69879298649896	4.71956972637794	9.852978676141054	0				

## Evidencia de escritura a tabla “modelo1”

FTS Options												
FTS Parsers												
FTS Temporal												
Foreign Table												
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Materialized Views												
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Functions		1		2		3		4		5		6		7		8		9		10		11		12		13	
Metadata		1		2		3		4		5		6		7		8		9		10		11		12		13	
Procedure		1		2		3		4		5		6		7		8		9		10		11		12		13	
Sequences		1		2		3		4		5		6		7		8		9		10		11		12		13	
Tables		1		2		3		4		5		6		7		8		9		10		11		12		13	
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