

Lab.

OCI DS MLOps

Este Lab apresenta como acessar e utilizar o ambiente OCI Data Science

Criando Free Trial e Demais Configurações

Oracle LiveLabs

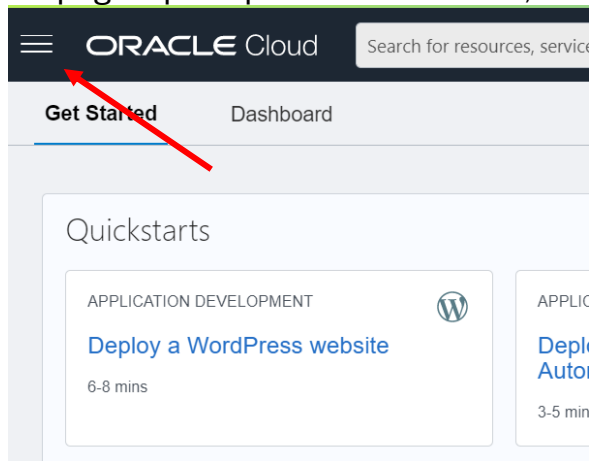
Executar os passos deste LiveLab, clicando no link abaixo, para preparar o ambiente antes de executar os próximos passos deste documento:

<https://apexapps.oracle.com/pls/apex/dbpm/r/livelabs/view-workshop?wid=673&clear=180&session=112089375589842>

Instância de Data Science

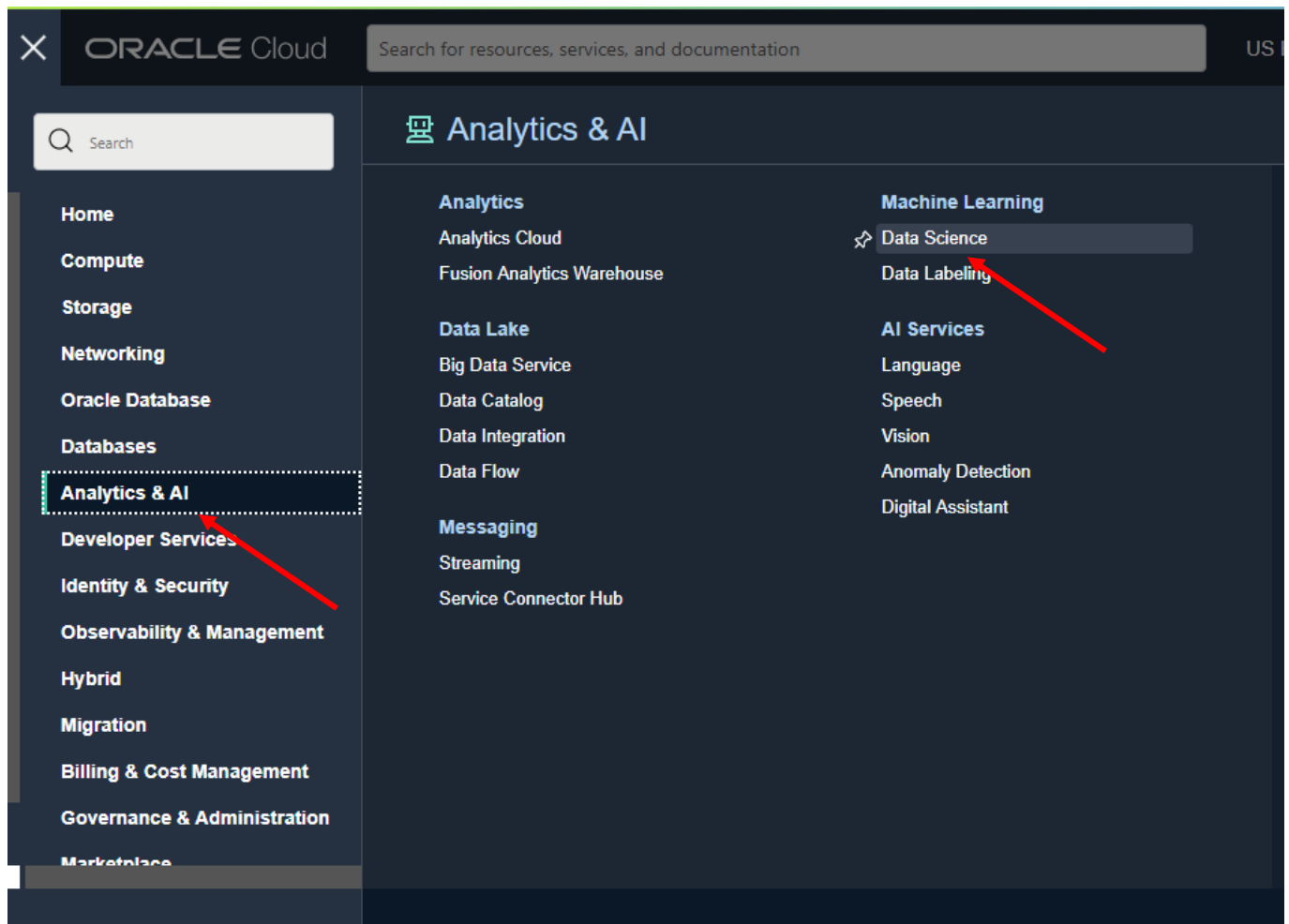
Acessando a Instância

Na página principal da Oracle Cloud, clicar no menu “hamburger”:



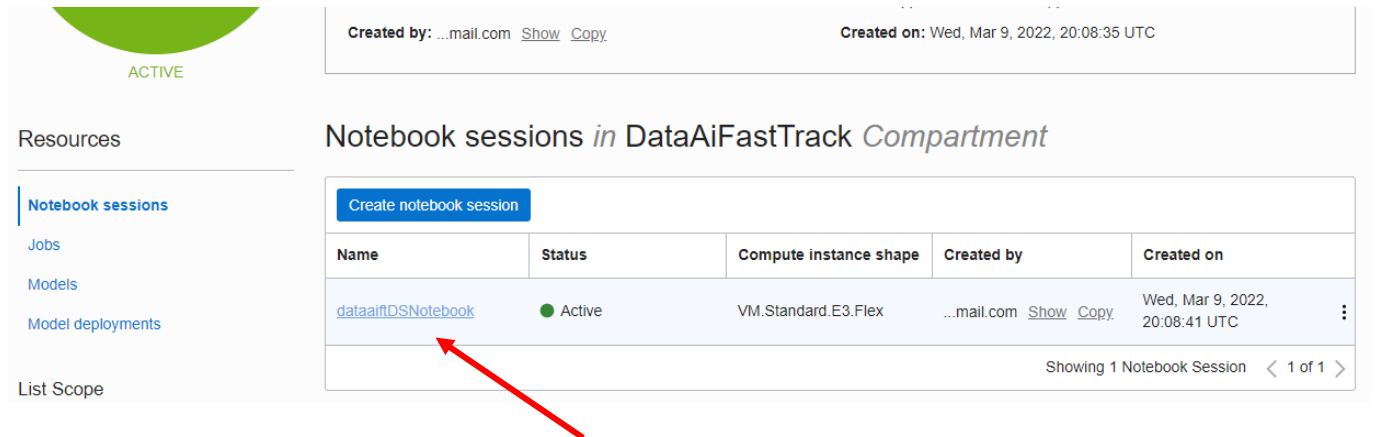
Clicar em “Analytics & AI” e após em “Data Science”:

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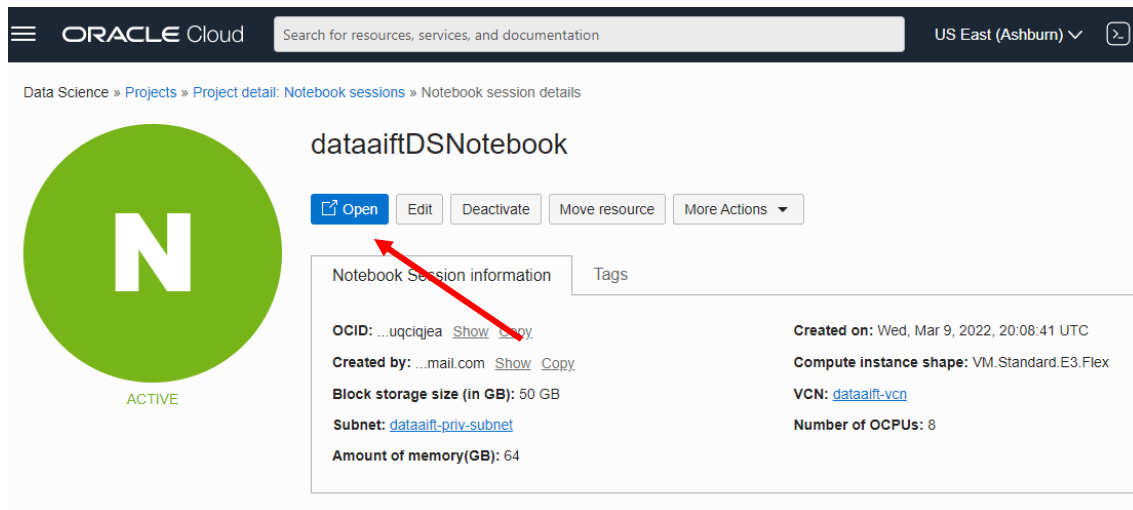
Na próxima tela clicar no ‘Name’ do projeto, conforme abaixo:



The screenshot shows the OCI Data & AI console interface. On the left, there is a sidebar with a green 'ACTIVE' status indicator and a list of resources: Notebook sessions, Jobs, Models, and Model deployments. The main area displays 'Notebook sessions in DataAiFastTrack Compartment'. At the top, there is a 'Create notebook session' button. Below it is a table with the following columns: Name, Status, Compute instance shape, Created by, and Created on. The table contains one entry: 'dataaiftDSNotebook' with status 'Active', shape 'VM.Standard.E3.Flex', and creation time 'Wed, Mar 9, 2022, 20:08:41 UTC'. A red arrow points to the 'Name' column of this entry. At the bottom right, it says 'Showing 1 Notebook Session < 1 of 1 >'.

Name	Status	Compute instance shape	Created by	Created on
dataaiftDSNotebook	Active	VM.Standard.E3.Flex	...mail.com Show Copy	Wed, Mar 9, 2022, 20:08:41 UTC

E na próxima tela, clicar em “Open”:



The screenshot shows the details page for the 'dataaiftDSNotebook' session. On the left, there is a large green circle with a white 'N' and the word 'ACTIVE' below it. The main area has the title 'dataaiftDSNotebook' and a row of buttons: 'Open', 'Edit', 'Deactivate', 'Move resource', and 'More Actions'. A red arrow points to the 'Open' button. Below the buttons is a 'Notebook Session information' tab. The information is organized into two columns. The left column contains: OCID: ...uqcijea (with Show and Copy links), Created by: ...mail.com (with Show and Copy links), Block storage size (in GB): 50 GB, Subnet: dataaift-priv-subnet, and Amount of memory(GB): 64. The right column contains: Created on: Wed, Mar 9, 2022, 20:08:41 UTC, Compute instance shape: VM.Standard.E3.Flex, VCN: dataaift-vcn, and Number of OCPUs: 8.

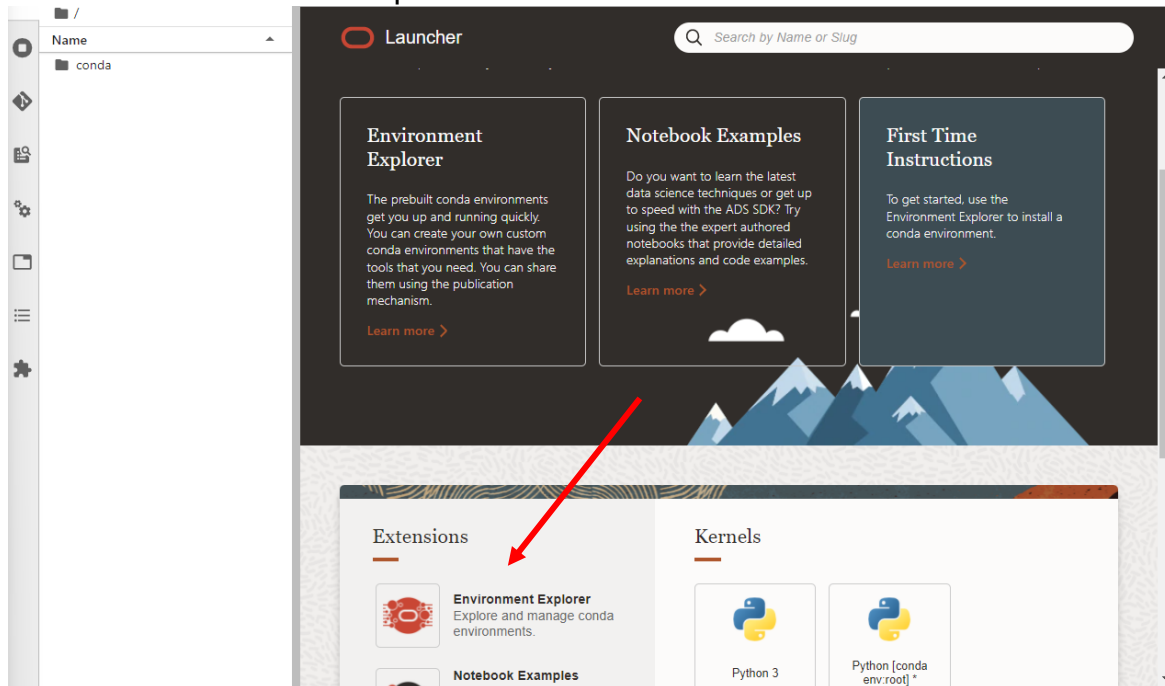
Notebook Session information	
OCID: ...uqcijea Show Copy	Created on: Wed, Mar 9, 2022, 20:08:41 UTC
Created by: ...mail.com Show Copy	Compute instance shape: VM.Standard.E3.Flex
Block storage size (in GB): 50 GB	VCN: dataaift-vcn
Subnet: dataaift-priv-subnet	Number of OCPUs: 8
Amount of memory(GB): 64	

Agora será necessário instalar um Kernel para podermos trabalhar um exemplo de Modelagem de Dados.

Na tela abaixo, seguir as seguintes instruções:

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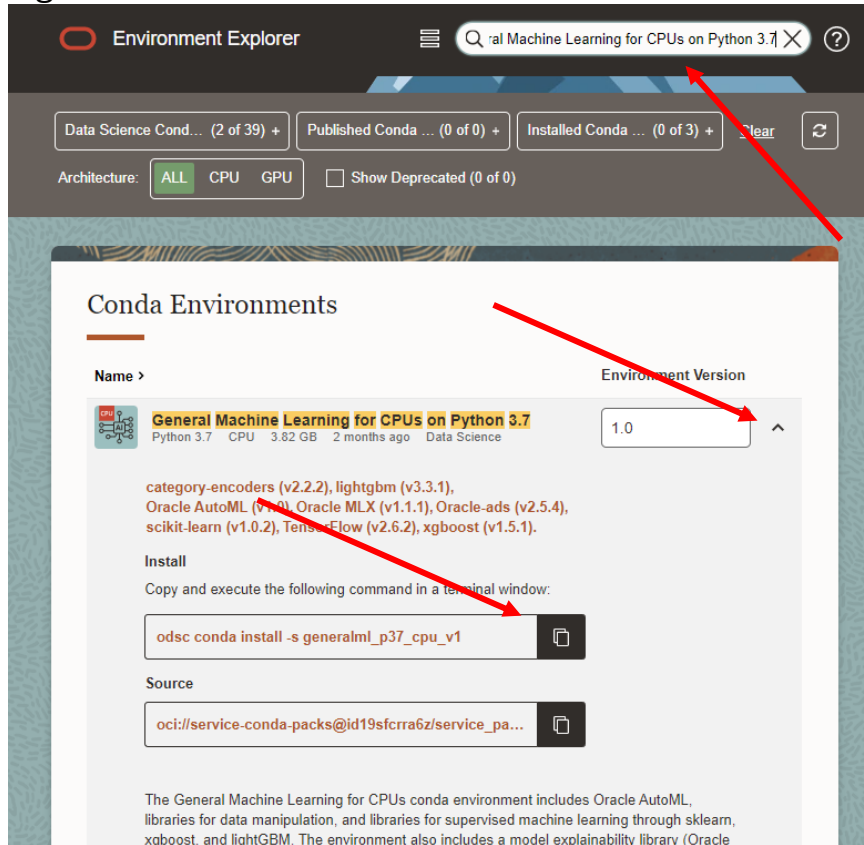
Clicar em “Environment Explorer”:



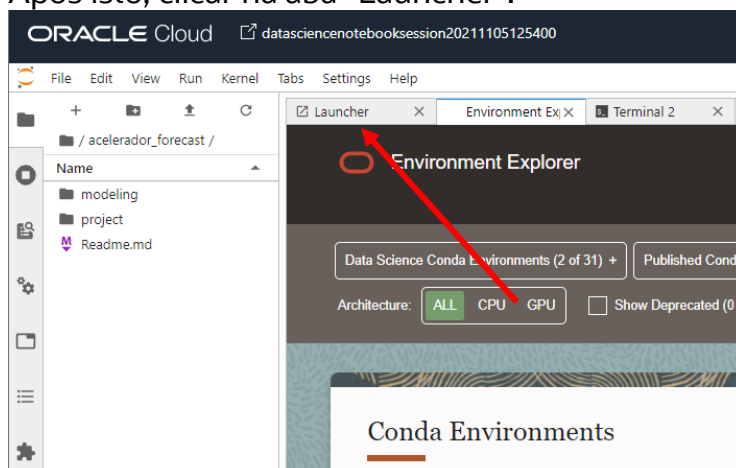
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Ao abrir a tela abaixo, procurar por “**General Machine Learning for CPUs on Python 3.7**” (copiar e colar no buscador), na linha com o nome do environment, clicar no último elemento à direita (seta para baixo).

Ao fazer isto aparecerão mais detalhes sobre o environment, clicar no botão/ícone de “copiar” logo abaixo de “Install”:

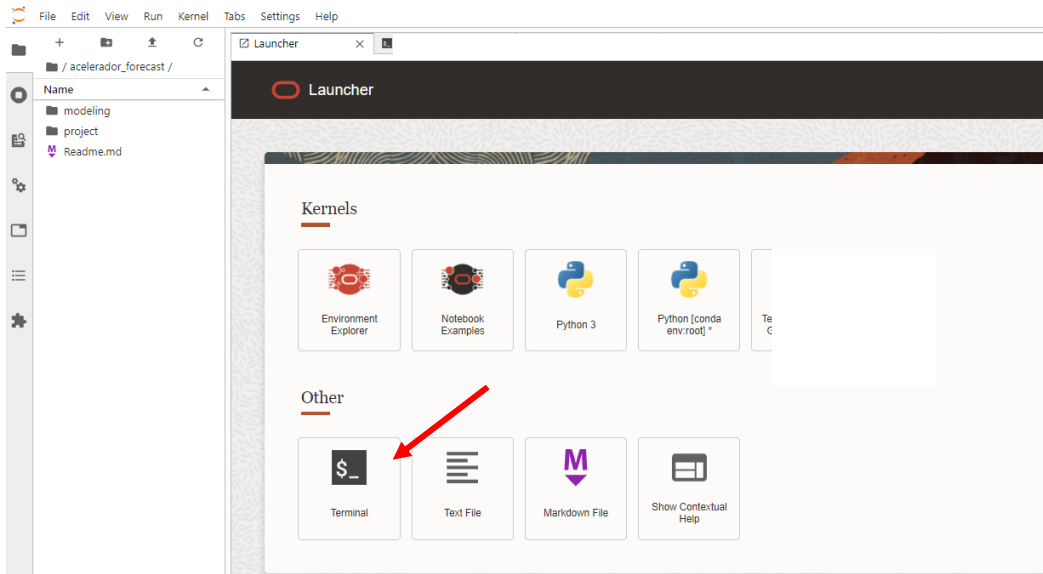


Após isto, clicar na aba “Launcher”:

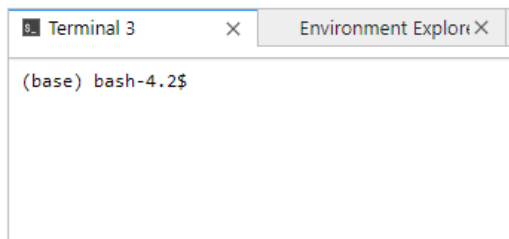


E quando aparecer a tela abaixo, clicar em “Terminal”:

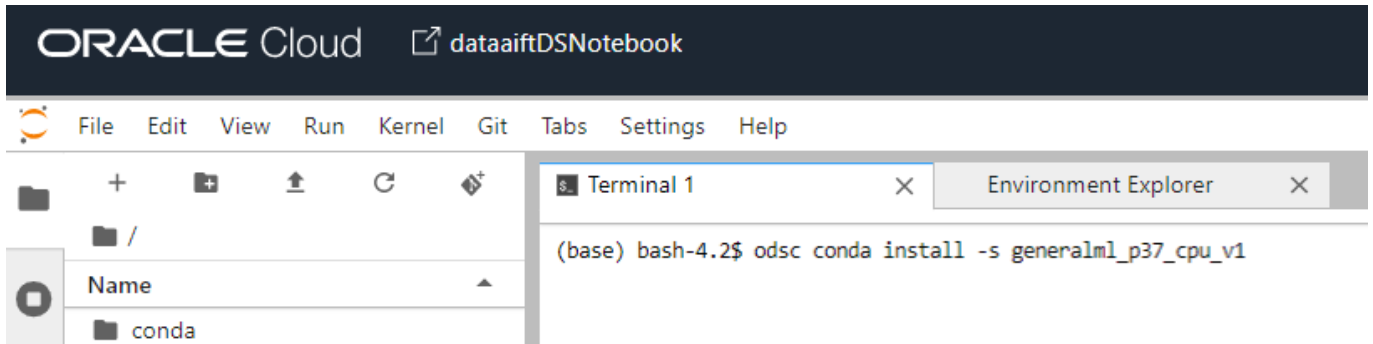
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Isto abrirá a tela abaixo:

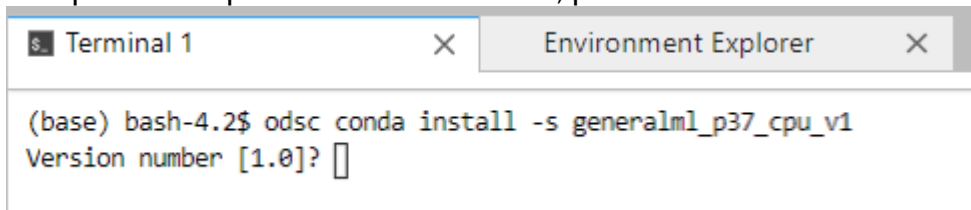


Pressionar no teclado **Ctrl+V**:



Aparecendo conforme acima, pressione **Enter** para instalar o Conda Environment selecionado.

Ao aparecer o questionamento abaixo, pressione **Enter** novamente:



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A instalação levará de 3 a 6 minutos, ao final aparecerá a mensagem conforme abaixo:

```
Terminal 1 x Environment Explorer x
Saving Notebooks: 31% [redacted] | 11/35 [00:00<00:01, 18.44it/s]
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/api_keys.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/autonomous_database.ipynb...
Saving Notebooks: 37% [redacted] | 13/35 [00:00<00:01, 14.47it/s]
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/binary_classification_attrition.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/class_weighting.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/classification_wine.ipynb...
Saving Notebooks: 46% [redacted] | 16/35 [00:00<00:01, 16.52it/s]
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/data_visualizations.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/datasetfactory_loading_data.ipynb...
Saving Notebooks: 51% [redacted] | 18/35 [00:01<00:01, 14.15it/s]
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/getting-started.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/mlx_ale.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/mlx_classification_attrition.ipynb...
Saving Notebooks: 60% [redacted] | 21/35 [00:01<00:00, 14.24it/s]
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/mlx_classification_wine.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/mlx_pdp_vs_ale.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/mlx_regression_diabetes.ipynb...
Saving Notebooks: 69% [redacted] | 24/35 [00:01<00:00, 16.84it/s]
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/mlx_whatif.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/model_catalog.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/model_deployment.ipynb...
Saving Notebooks: 77% [redacted] | 27/35 [00:01<00:00, 16.26it/s]
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/model_deployment_using_jobs.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/model_evaluation.ipynb...
Saving Notebooks: 83% [redacted] | 29/35 [00:01<00:00, 17.05it/s]
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/onnx.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/project.ipynb...
Saving Notebooks: 89% [redacted] | 31/35 [00:01<00:00, 15.89it/s]
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/pyod_classification_fraud.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/sqlmagic.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/transforming_data.ipynb...
INFO:ODSC:Notebook location /home/datascience/conda/notebooks/generalml_p37_cpu_v1/vault.ipynb...
Saving Notebooks: 100% [redacted] | 35/35 [00:01<00:00, 18.37it/s]
INFO:ODSC:Start to update the kernel name...
INFO:ODSC:Conda environment setup complete.
The environment setup is complete. To activate it for use in the terminal run `conda activate /home/datascience/conda/generalml_p37_cpu_v1`. It may take a few seconds for the kernel to appear in the JupyterLab launcher. To change the description of the environment, update /home/datascience/conda/generalml_p37_cpu_v1/*_manifest.yaml.
(base) bash-4.2$
```

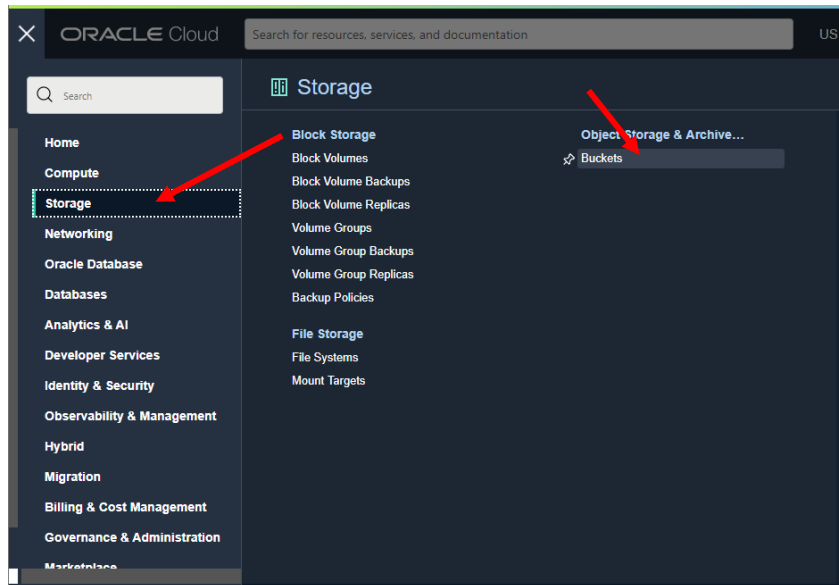

OCI Data & AI In Lab – Hands-off Lab

Rodando script de Data Science com o Notebook Preditor_Locacao_v1.ipynb

Download, upload e execução do Script

Para realizar o download do arquivo, será necessário acessar o Object Storage chamado “raw-data”

Basta acessar o menu de “hamburger”, clicar em “Storage” e após em “Bucket”:



Após clicar no “Name” do bucket criado:

Object Storage & Archive
Storage

Buckets

List Scope

Compartment
DataAiFastTrack
demoth7 (root)/DataAiFastTrack

Tag filters
[add](#) [clear](#)
no tag filters applied

Buckets in DataAiFastTrack Compartment

Object Storage provides unlimited, high-performance, durable, and secure data storage. Data is uploaded as objects that are stored in buckets. [Learn more](#)

You can use 10 GiB of Object Storage and 10 GiB of Archive Storage for free in your home region. You are using approximately 150.63 MiB of combined Object Storage and Archive Storage. If you use more than 20 GiB and have not upgraded when your Free Trial ends, your data is deleted. [Show details](#).

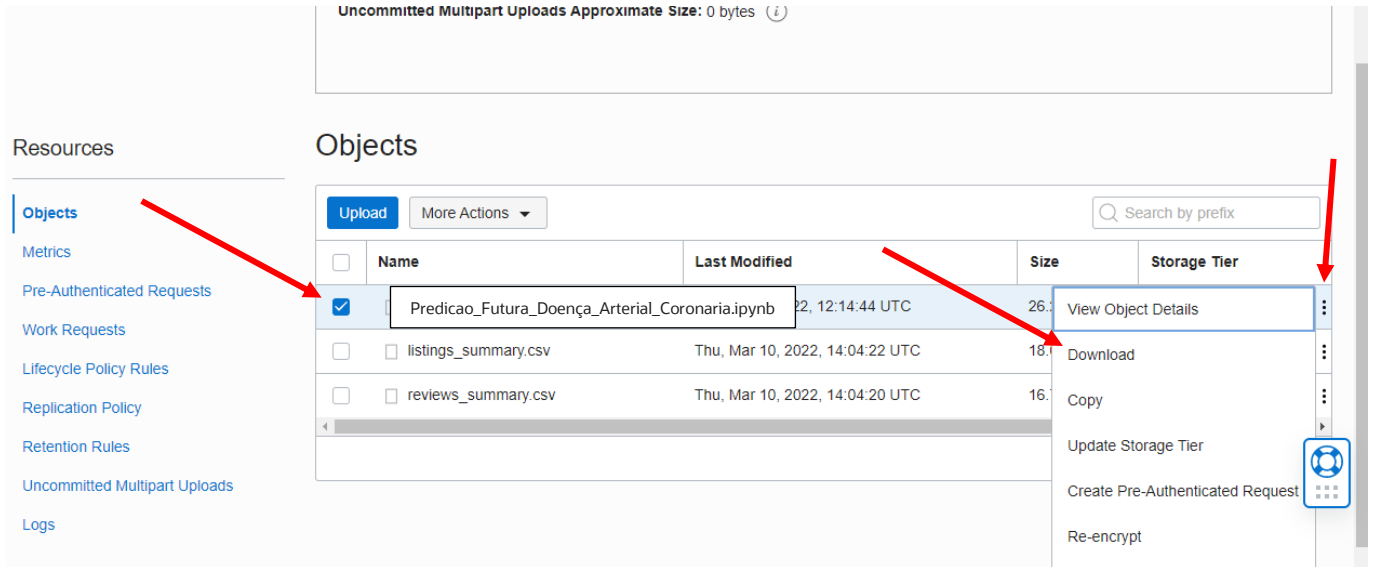
Create Bucket

Name	Default Storage Tier	Visibility	Created
ai-services	Standard	Public	Wed, Mar 9, 2022, 20:08:34 UTC
data-out	Standard	Private	Wed, Mar 9, 2022, 20:08:34 UTC
dataflow-app	Standard	Private	Wed, Mar 9, 2022, 20:08:35 UTC
dataflow-logs	Standard	Private	Wed, Mar 9, 2022, 20:08:34 UTC
raw-data	Standard	Private	Wed, Mar 9, 2022, 20:08:34 UTC

Showing 5 Items < 1 of 1 >

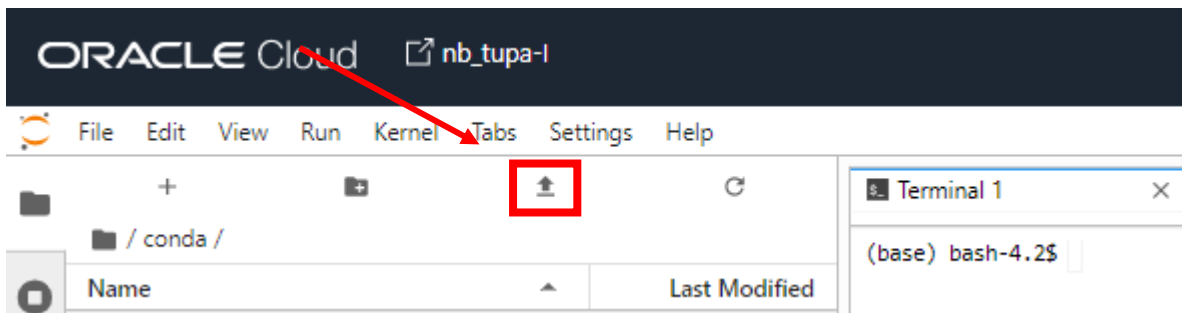
Na próxima tela, abaixar o cursor até o final, selecionar o arquivo “Predicao_Futura_Doenca_Arterial_Coronaria.ipynb”, clicar em nos três pontinhos na mesma linha do arquivo e por fim clicar em “Download”:

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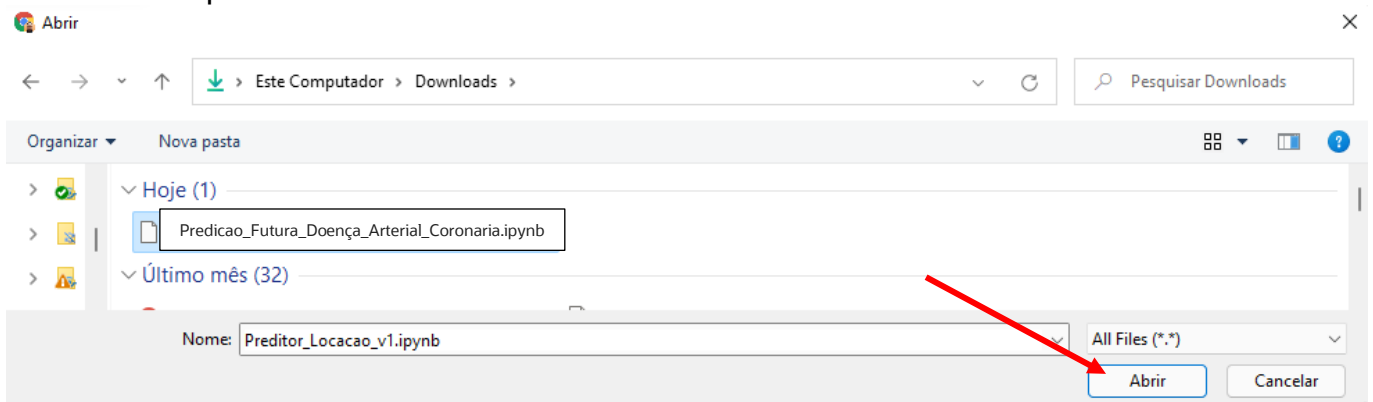


Pronto, o notebook está baixado na sua máquina!

Agora, retornando no notebook, precisaremos fazer o upload dele, para isto basta voltar no OCI Data Science e clicar no ícone de “upload”, conforme abaixo:

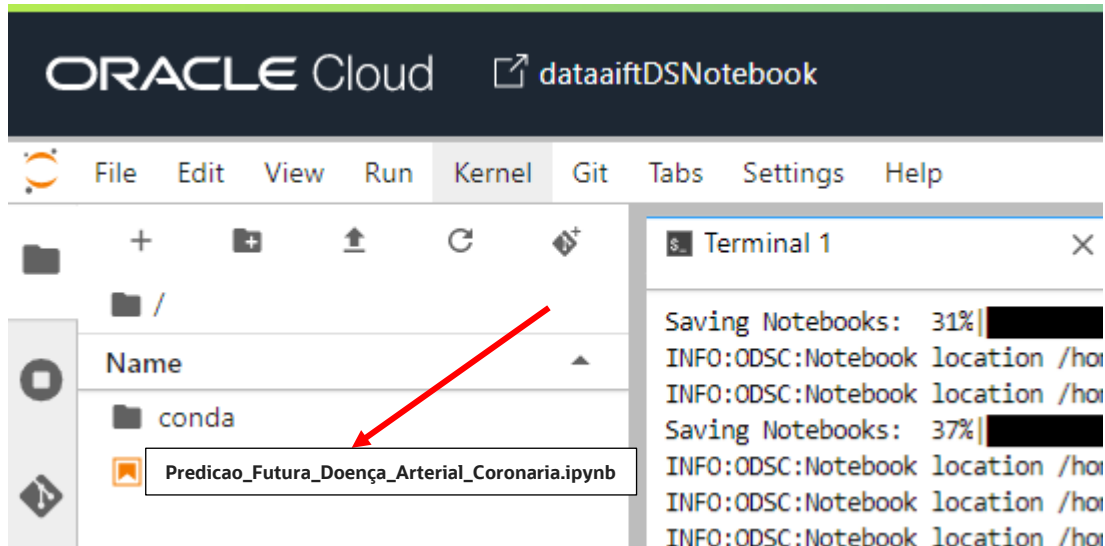


Ao abrir a janela abaixo, precisará navegar até a pasta onde o arquivo foi baixado, clicar duas vezes nele e após clicar em “Abrir”:

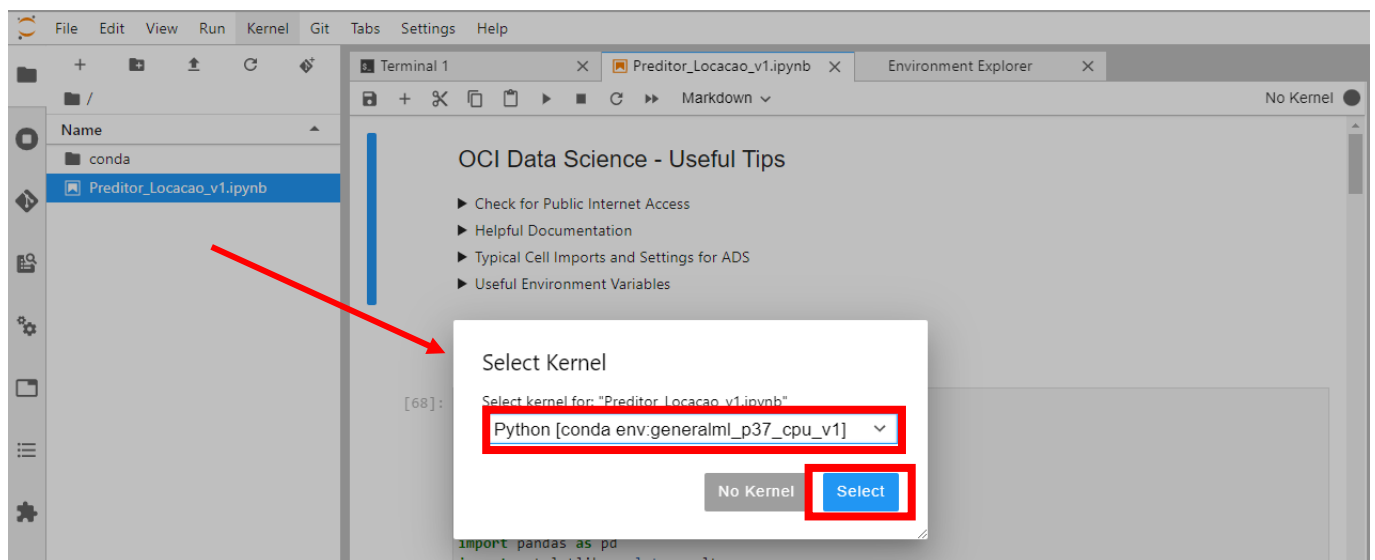


Após isto o arquivo aparecerá conforme abaixo, para abri-lo precisará clicar duas vezes nele:

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Abrirá uma caixa de opções para selecionar o Kernel, que deve ser o indicado abaixo, após selecionar clicar em “Select”:



E finalmente o notebook estará aberto e pronto para ser executado no OCI Data Science, **agora basta seguir as instruções contidas no mesmo!**