

Oracle Al Workshop

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Oracle Al Workshop

Desperte o Poder da lA: Acelere seus Agents com GPUs NVIDIA e LLMs direto do Hugging Face em poucos minutos



Speaker

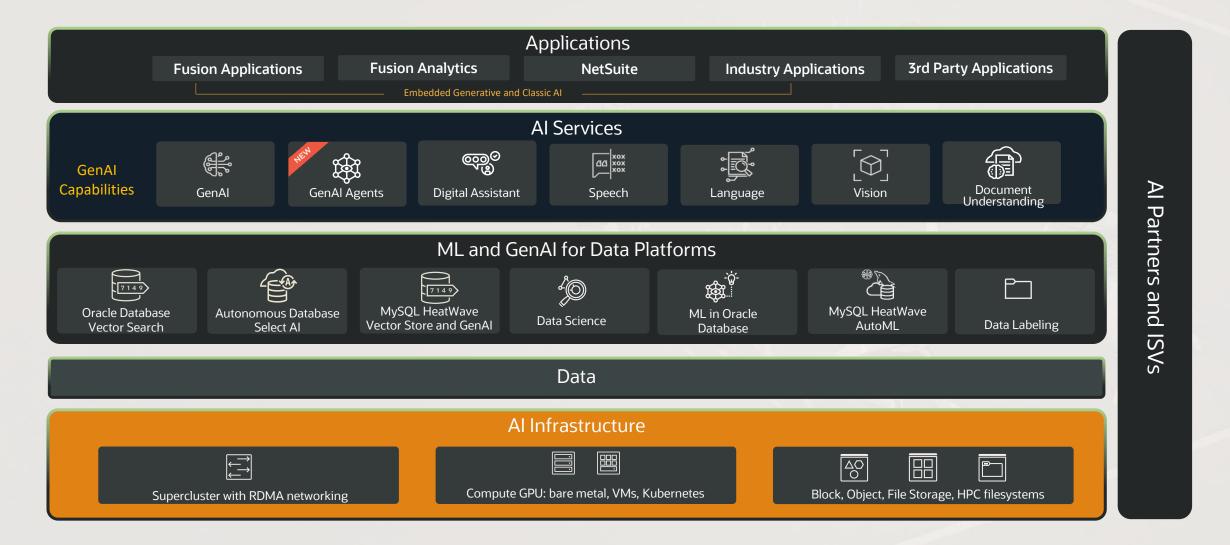




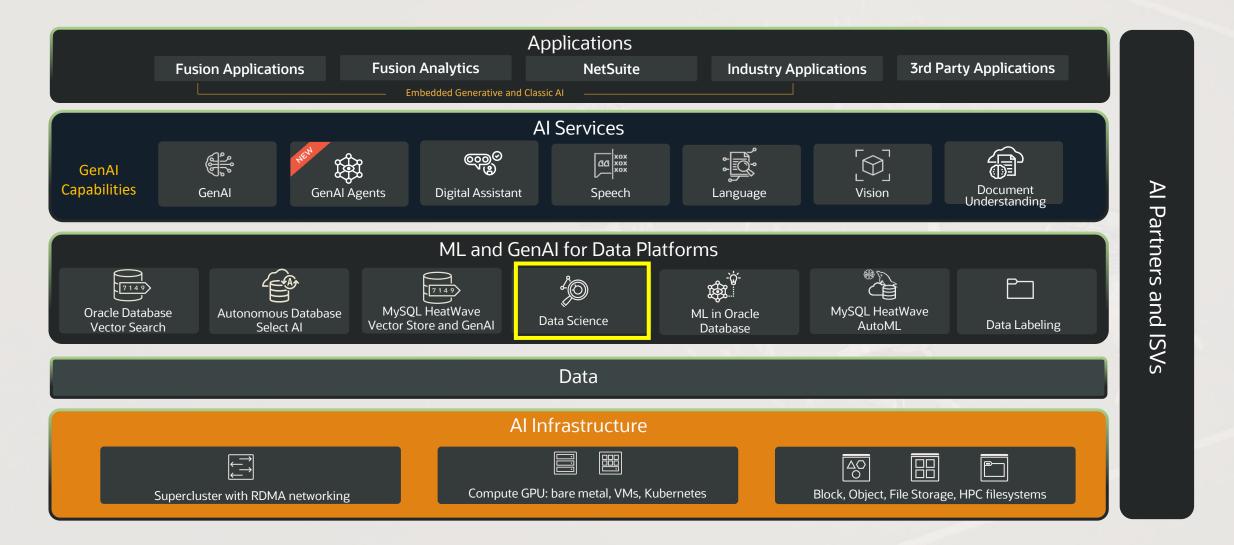


Rafael Dias
Principal Al Engineer
www.linkedin.com/in/rafael-roberto-dias-data-lover/

OCI AI Services



OCI AI Services





OCI Data Science

- Acelere e automatize todo o ciclo de vida de ciência de dados de ponta a ponta
- Use suas ferramentas e estruturas Python de código aberto favoritas
- MLOps de nível empresarial com interfaces flexíveis e escala ilimitada
- Colabore com colegas de equipe em ativos de ciência de dados compartilháveis e reproduzíveis
- Execute cargas de trabalho em grande escala com acesso a GPUs bare metal e processamento
- Pague apenas pela infraestrutura sob demanda, sem impostos ou despesas adicionais

Oracle Cloud Infrastructure Data Science

Develop & Experiment

Notebook Sessions

jupyter







Manage, Share, & Reproduce

Model Catalog







Operationalize with MLOps

Jobs



Pipelines



Model Deployments



Model Monitoring



GenAl Models

Al Quick Actions



Data Management

Database – Data Lake – Access – Integration – Preparation

Infrastructure

CPU – GPU – Storage – Network



OCI Data Science – Al quick actions

- Use GPUs NVIDIA avançadas: A10, L40S, H100
- Deploy e Fine tune de vários Foundation Models
- Fine tunning utilizando dados próprios
- Teste o modelo logo após colocá-lo em produção
- Avalie seus modelos para garantir a qualidade
- Implante LLMs usando servidores de inferência especializados como TGI e vLLM
- Bring your own model do HuggingFace ou fine tuned





Hora do Desafio!



Acessar o link abaixo ou o QR Code:

https://github.com/rafaelrdias/oracle-ai-workshop-fy25

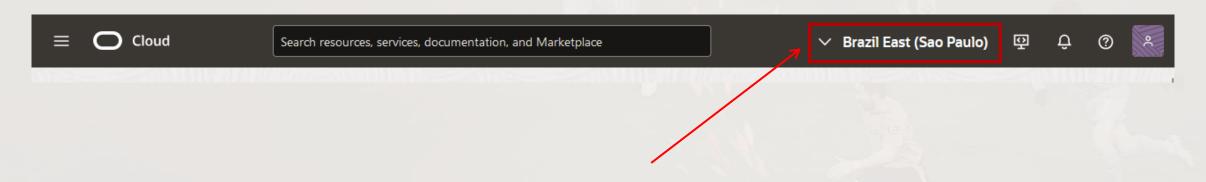






Passo 1:Tenancy Região de São Paulo (GRU)

1.1 Necessário ter a tenancy subscrita na região de São Paulo, para utilizar o OCI Generatice AI

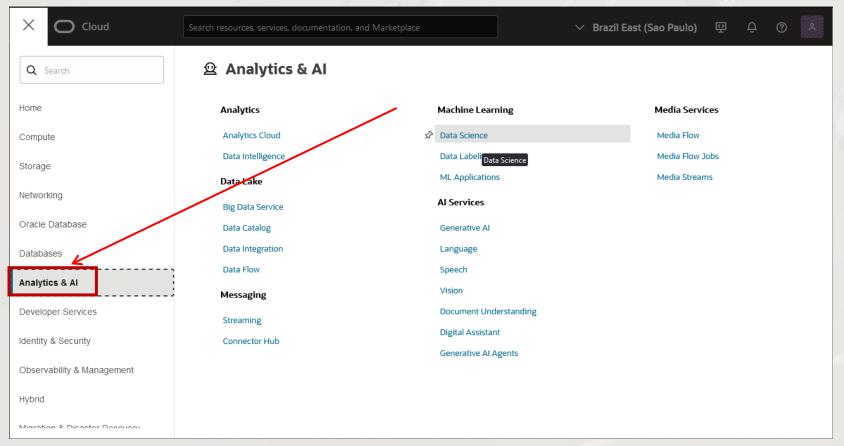






Passo 2: Data Science

2.1 No menu, selecione "Analytics & Al"

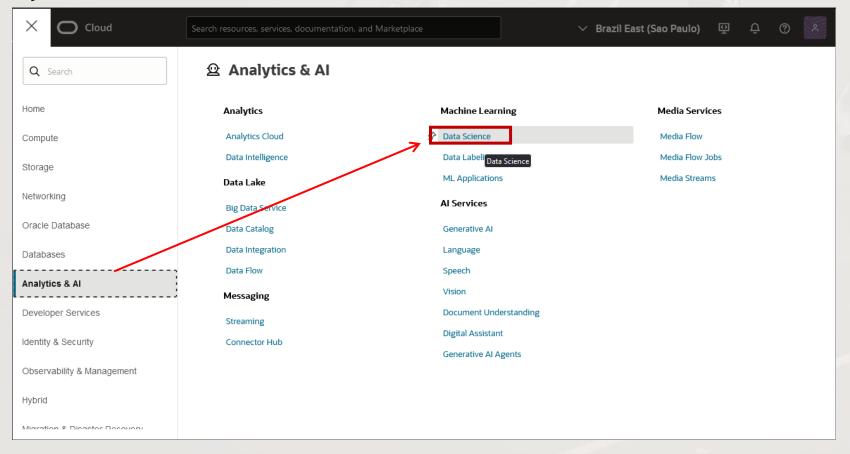






Passo 2: Data Science

2.2 Em "Analytics & Al", selecione "Data Science"

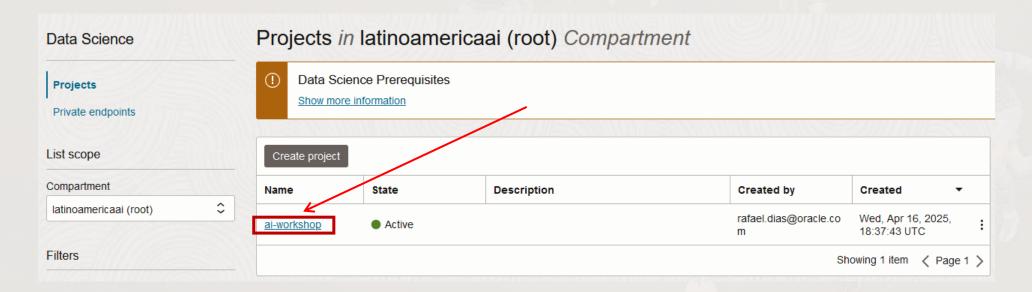






Passo 2: Data Science

2.3 Em "Data Science", clique no projeto 'ai-workshop'

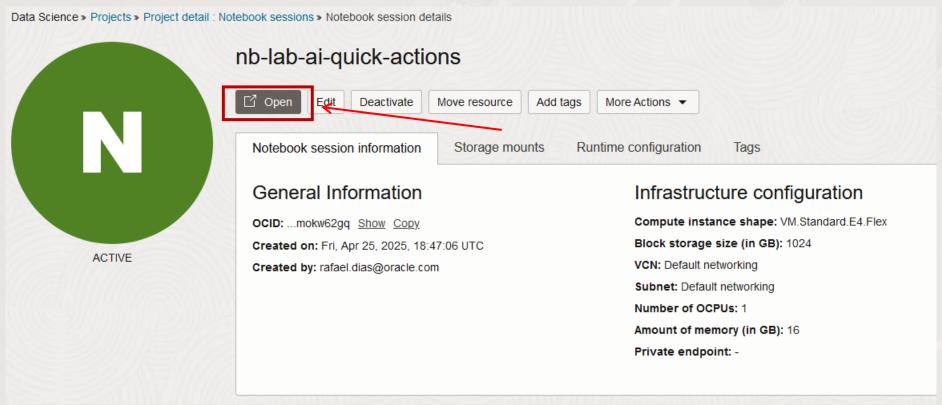






Passo 2: Data Science

2.5 Em "nb-lab-ai-quick-actions ", clique em 'Open'

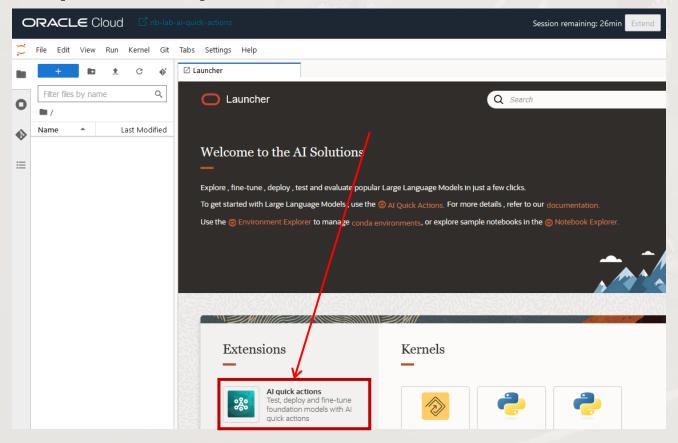






Passo 3: Notebook session

3.1 No Notebook, clique em 'Al quick actions'

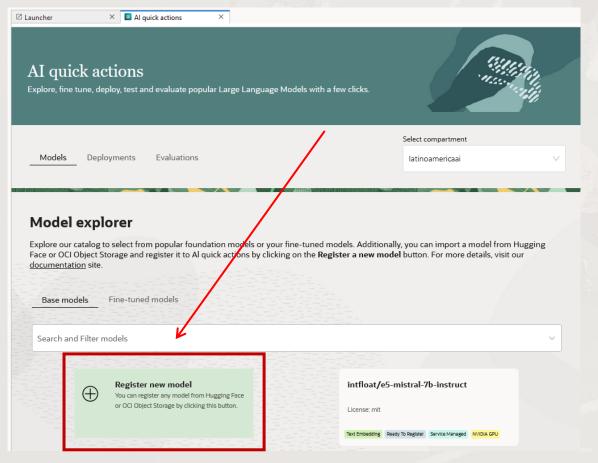






Passo 4: Al quick actions

4.1 No Al quick actions, clique em 'Register new model'



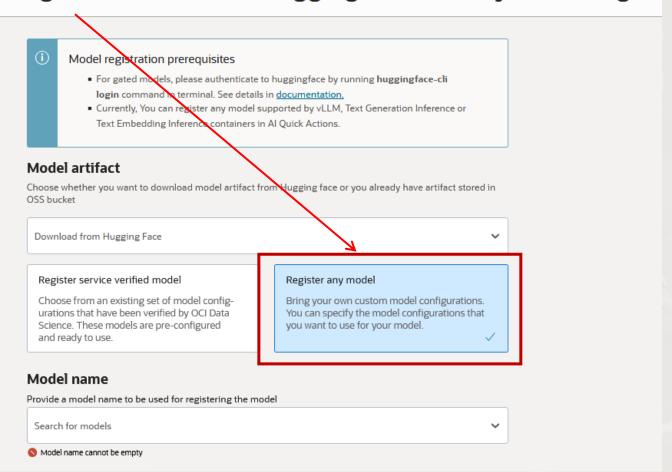


Passo 4: Al quick actions



4.2 Em 'Register model from...', clique em 'Register any model'

Register model from Hugging Face or Object Storage

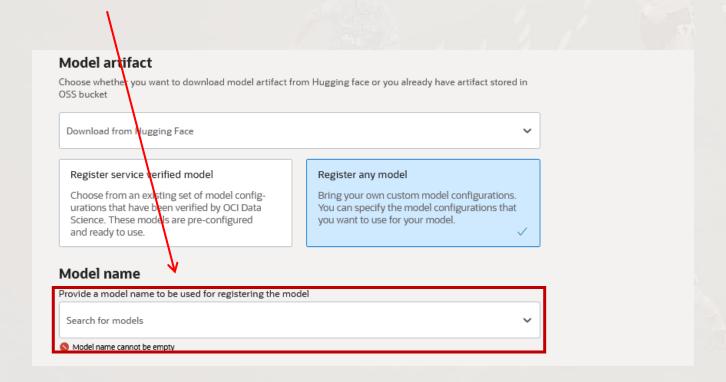




Passo 4: Al quick actions



4.3 Ainda em 'Register model from...', clique em 'Search for models'

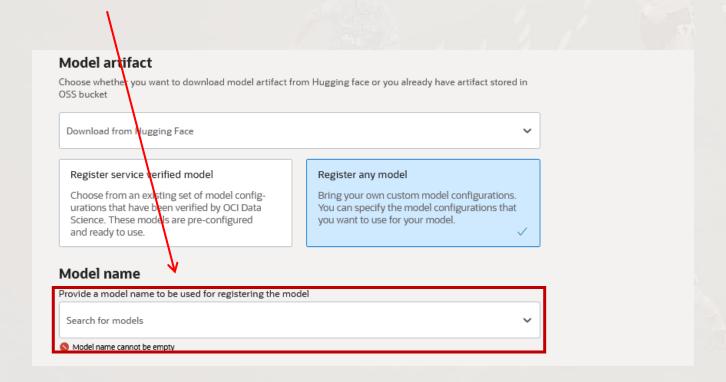




Passo 4: Al quick actions



4.3 Ainda em 'Register model from...', clique em 'Search for models'

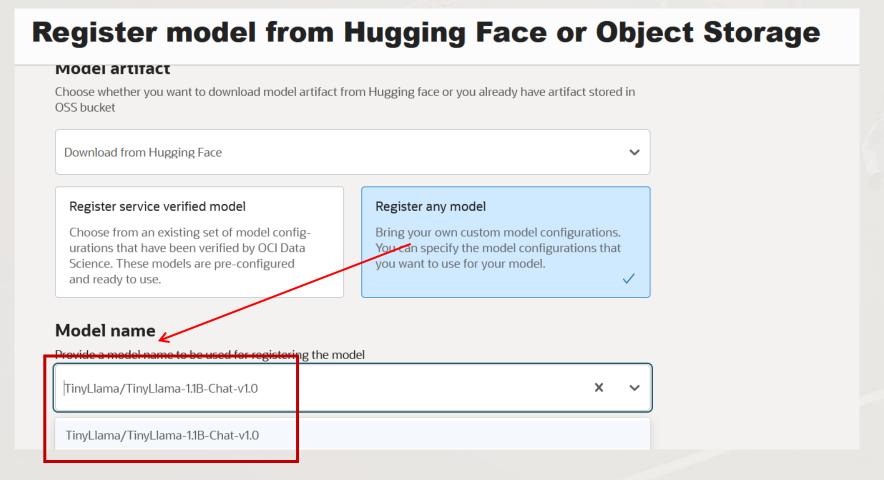




Passo 4: Al quick actions



4.4 Inserir o LLM chamado "TinyLlama/TinyLlama-1.1B-Chat-v1.0", e clicar no nome que aparecer abaixo

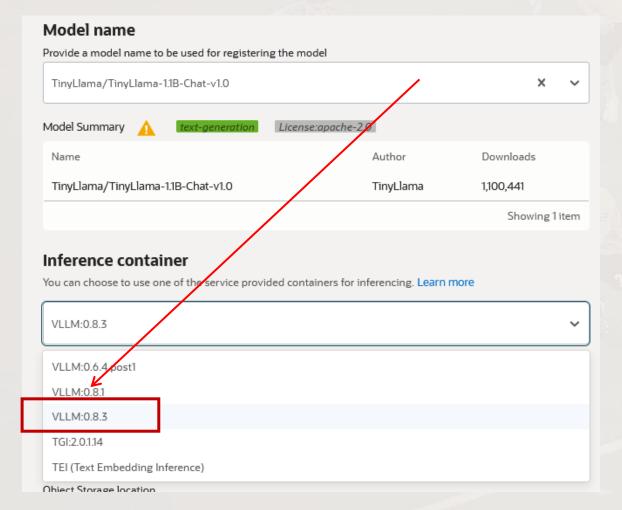




Passo 4: Al quick actions



4.5 Irá aparecer alguns detalhes sobre o LLM Tiny, após clicar em 'Inference container' e escolher a opção 'VLLM:0.8.3'

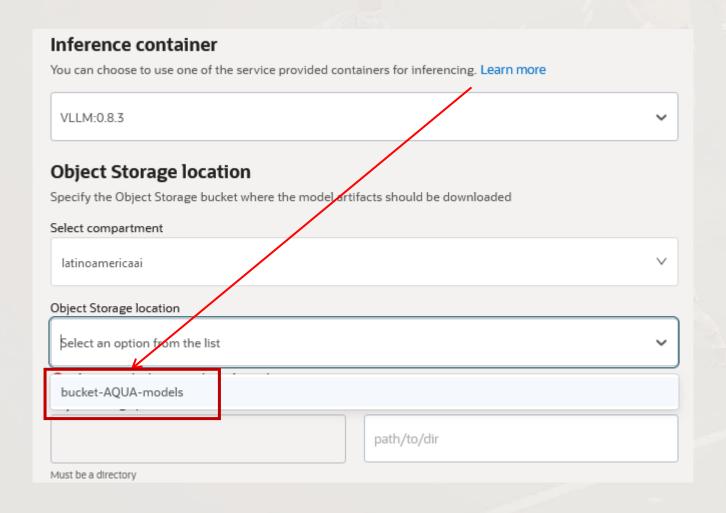




Passo 4: Al quick actions



4.6 Logo abaixo selecionar em 'Object Storage location' o 'bucket-AQUA-models'

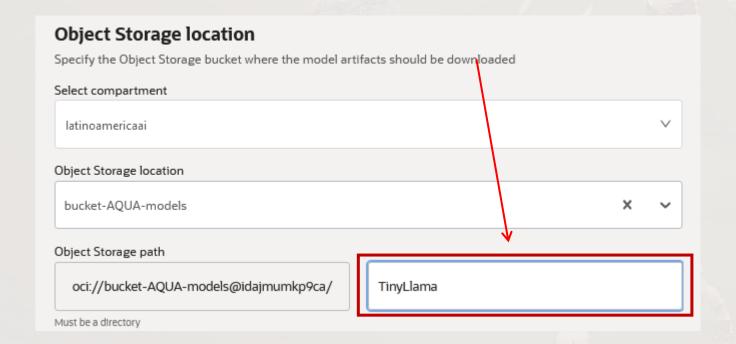




Passo 4: Al quick actions



4.7 E em 'path/to/dir' colocar o nome 'TinyLlama'

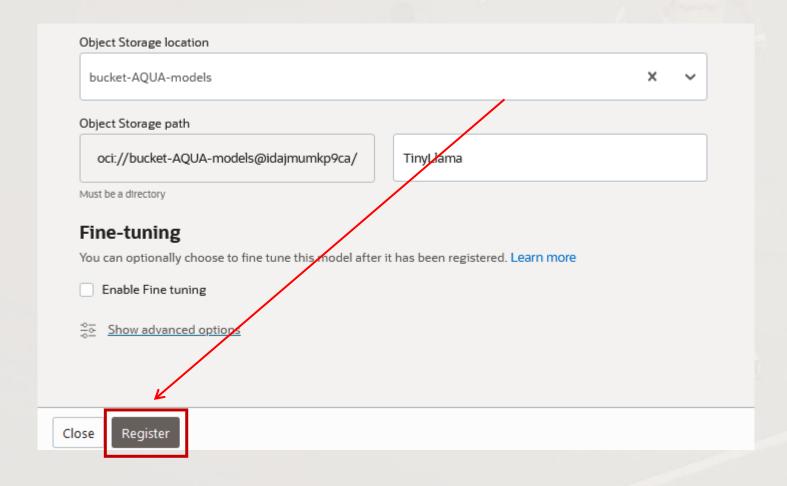




Passo 4: Al quick actions



4.8 E finalmente clicar em 'Register'





Passo 4: Al quick actions



4.9 Em poucos minutos finalizará o registro e aparecerá conforme abaixo

```
☑ Launcher

                                                          × ■ datascience@:~
                           × Al quick actions
   "TinyLlama/TinyLlama-1.1B-Chat-v1.0/README.md",
   "TinyLlama/TinyLlama-TinyLlama-1.1B-Chat-v1.0/eval_results.json"
  "upload-failures": {},
  "uploaded-objects": {}
   "compartment_id": "ocid1.tenancy.oc1..aaaaaaaakzuzfystmhyj7je5x7ymwd3ofd7wb6rtsfrx7nvbo272vta3rwna",
   "id": "ocid1.datasciencemodel.oc1.sa-saopaulo-1.amaaaaad6nji3aaadrwq4u6gxpulnjkpool6efykjxc6penrw5tnm552nla",
   "is fine tuned model": false.
   "license": "apache-2.0",
    "name": "TinyLlama/TinyLlama-1.1B-Chat-v1.0",
   "organization": "TinyLlama",
    "project_id": "ocid1.datascienceproject.oc1.sa-saopaulo-1.amaaaaaad6nji3aarpr54ridavh63zdopcca7ft12xeaz75n2dvdkoa7alng",
    "tags": {
           "CreatedBy": "ocid1.datasciencenotebooksession.oc1.sa-saopaulo-1.amaaaaad6nji3aagmk3bthxzhowksry3nemjapmvgwez6gi5gicmokw62gq",
            "CreatedOn": "2025-04-25T20:25:22.226Z"
       "aqua_custom_base_model": "true",
       "license": "apache-2.0",
       "task": "text-generation",
       "model_format": "SAFETENSORS",
       "OCI AOUA": "active",
       "organization": "TinyLlama"
   "task": "text-generation",
   "time_created": "2025-04-25 20:25:22.326000+00:00",
    "console_link": "https://cloud.oracle.com/data-science/models/ocid1.datasciencemodel.oc1.sa-saopaulo-1.amaaaaad6nji3aaadrwq4u6gxpulnjkpool6efykjxc6penrw5tnm5
    "search_text": "{'CreatedBy': 'ocid1.datasciencenotebooksession.oc1.sa-saopaulo-1.amaaaaad6nji3aagmk3bthxzhowksry3nemjapmvgwez6gi5gicmokw62go', 'CreatedOn':
'2025-04-25T20:25:22.226Z'},true,apache-2.0,text-generation,SAFETENSORS,active,TinyLlama",
   "ready_to_deploy": true,
   "ready_to_finetune": false,
   "ready_to_import": false,
   "nvidia_gpu_supported": true,
   "arm cpu supported": false,
    "model_file": "",
    "model_formats": [
       "SAFETENSORS"
   "inference_container": "odsc-vllm-serving-llama4",
   "inference_container_uri": null,
   "finetuning_container": null,
   "evaluation_container": "odsc-llm-evaluate",
   "artifact_location": "oci://bucket-AQUA-models@idajmumkp9ca/TinyLlama/TinyLlama/TinyLlama-1.1B-Chat-v1.0"
(base) bash-4.4$
```



Passo 4: Al quick actions



Mandar este print contendo tmb data e hora

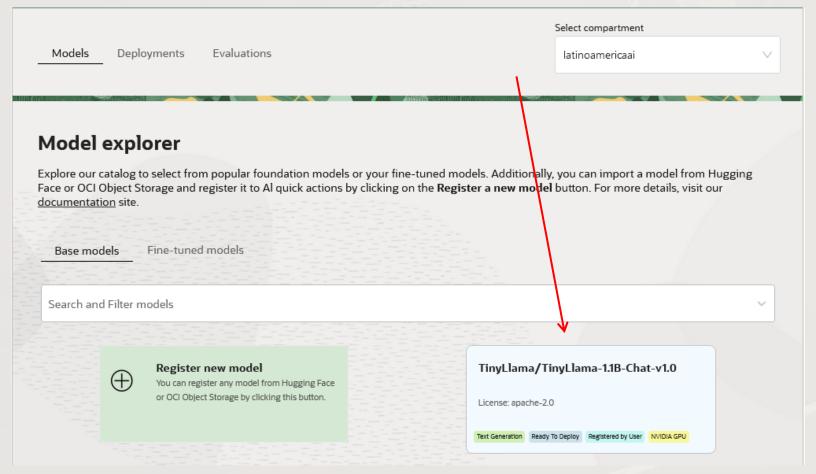
```
Launcher
                           × Al quick actions
                                                           × ■ datascience@:~
   "TinyLlama/TinyLlama/TinyLlama-1.1B-Chat-v1.0/README.md".
   "TinyLlama/TinyLlama-TinyLlama-1.1B-Chat-v1.0/eval_results.json"
  "upload-failures": {},
  "uploaded-objects": {}
   "compartment_id": "ocid1.tenancy.oc1..aaaaaaaakzuzfystmhyj7je5x7ymwd3ofd7wb6rtsfrx7nvbo272vta3rwna",
   "id": "ocid1.datasciencemodel.oc1.sa-saopaulo-1.amaaaaad6nji3aaadrwq4u6gxpulnjkpool6efykjxc6penrw5tnm552nla",
   "is fine tuned model": false.
   "license": "apache-2.0",
   "name": "TinyLlama/TinyLlama-1.1B-Chat-v1.0",
   "organization": "TinyLlama",
    "project_id": "ocid1.datascienceproject.oc1.sa-saopaulo-1.amaaaaaad6nji3aarpr54ridavh63zdopcca7ft12xeaz75n2dvdkoa7alng",
    "tags": {
           "CreatedBy": "ocid1.datasciencenotebooksession.oc1.sa-saopaulo-1.amaaaaad6nji3aagmk3bthxzhowksry3nemjapmvgwez6gi5gicmokw62gq",
            "CreatedOn": "2025-04-25T20:25:22.226Z"
       "aqua_custom_base_model": "true",
       "license": "apache-2.0",
       "task": "text-generation",
       "model_format": "SAFETENSORS",
       "OCI AOUA": "active",
       "organization": "TinyLlama"
   "task": "text-generation",
   "time_created": "2025-04-25 20:25:22.326000+00:00",
    "console_link": "https://cloud.oracle.com/data-science/models/ocid1.datasciencemodel.oc1.sa-saopaulo-1.amaaaaad6nji3aaadrwq4u6gxpulnjkpool6efykjxc6penrw5tnm5
    "search_text": "{'CreatedBy': 'ocid1.datasciencenotebooksession.oc1.sa-saopaulo-1.amaaaaad6nji3aagmk3bthxzhowksry3nemjapmvgwez6gi5gicmokw62go', 'CreatedOn':
'2025-04-25T20:25:22.226Z'},true,apache-2.0,text-generation,SAFETENSORS,active,TinyLlama",
   "ready_to_deploy": true,
   "ready_to_finetune": false,
   "ready_to_import": false,
   "nvidia_gpu_supported": true,
   "arm cpu supported": false.
    "model_file": "",
    "model_formats": [
       "SAFETENSORS"
   "inference_container": "odsc-vllm-serving-llama4",
   "inference_container_uri": null,
   "finetuning_container": null,
   "evaluation_container": "odsc-llm-evaluate",
   "artifact_location": "oci://bucket-AQUA-models@idajmumkp9ca/TinyLlama/TinyLlama/TinyLlama-1.1B-Chat-v1.0"
(base) bash-4.4$
```



Passo 4: Al quick actions



4.10 E ao retornar à aba interna 'Al quick actions' será possível ver o LLM Tiny disponível para deploy

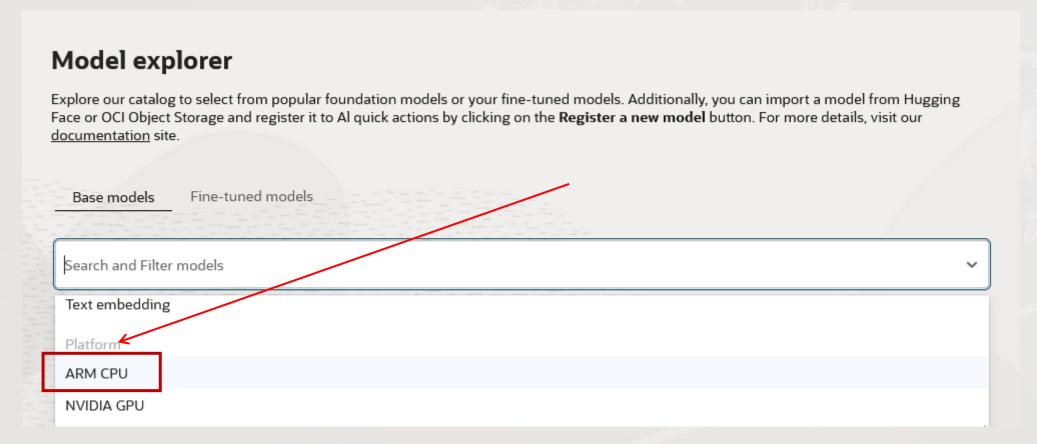






Passo 1: Model explorer

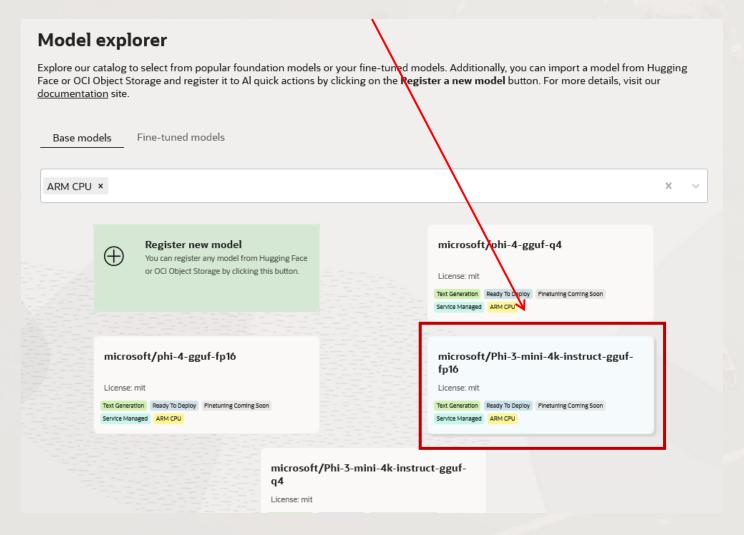
1.1 Clicar em 'Search and Filter models', após procurar por 'Platform' e clicar em 'ARM CPU'



Passo 1: Model explorer



1.2 Após clicar no modelo LLM 'microsoft/Phi-3-mini-4k-instruct-gguf-fp16'

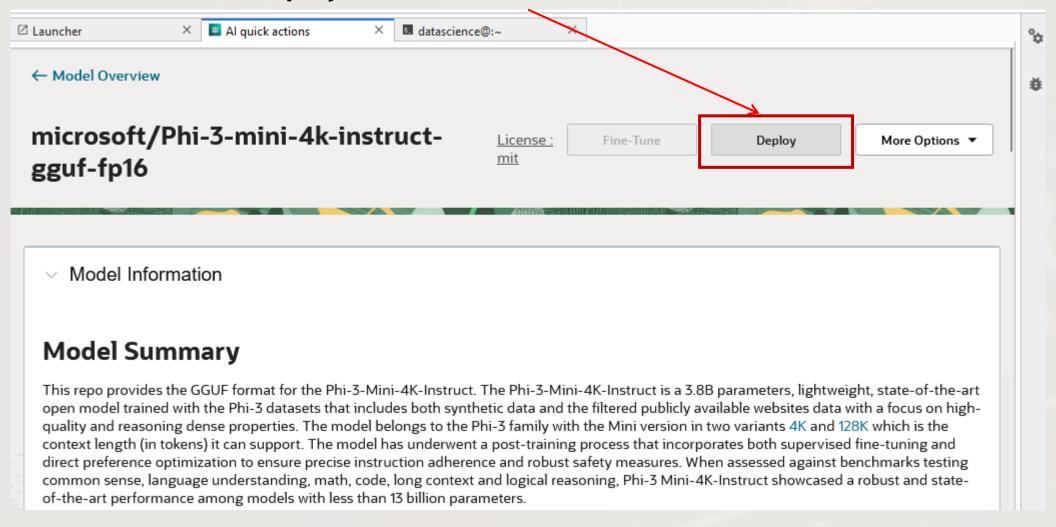




Passo 1: Model explorer



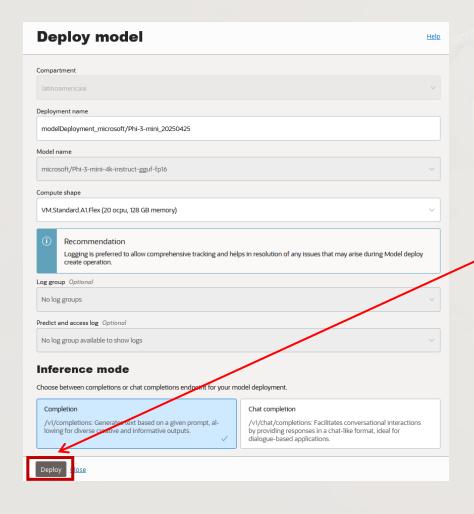
1.3 E então clicar em 'Deploy'

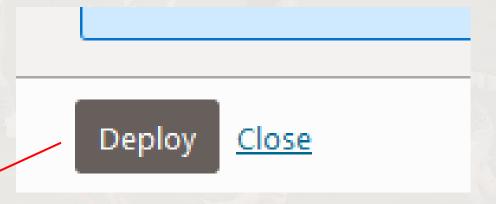


Passo 2: Deploy model



2.1 Na próxima tela pode manter as configurações iniciais e clicar em 'Deploy'







Passo 2: Deploy model



2.2 Aparecerá a tela abaixo com o 'Lifecycle state' como 'Creating'

nodelDeployment_m	nicrosoft/Phi-3-mini_20250425 View in Console
General information	
OCID:	ocid1.datascien <u>Show</u> <u>Copy</u>
Endpoint:	https://modelde Show Copy
Model name:	microsoft/Phi-3-mini-4k-instruct-gguf-fp16
Model deployment details:	modelDeployment_microsoft/Phi-3-mini_20250425 Open logs in terminal
Compute shape:	VM.Standard.A1.Flex (20 OCPUs, 128 GBs)
Instance count:	1
Model deploy predict endpoint:	/v1/completions
Lifecycle state:	Creating
Lifecycle details:	-
Log groups:	-
Log:	-
Model file:	Phi-3-mini-4k-instruct-fp16.gguf



Passo 2: Deploy model



2.3 Após alguns poucos minutos, ao finalizar o deploy, o 'Lifecycle state' aparecerá como

'Active'

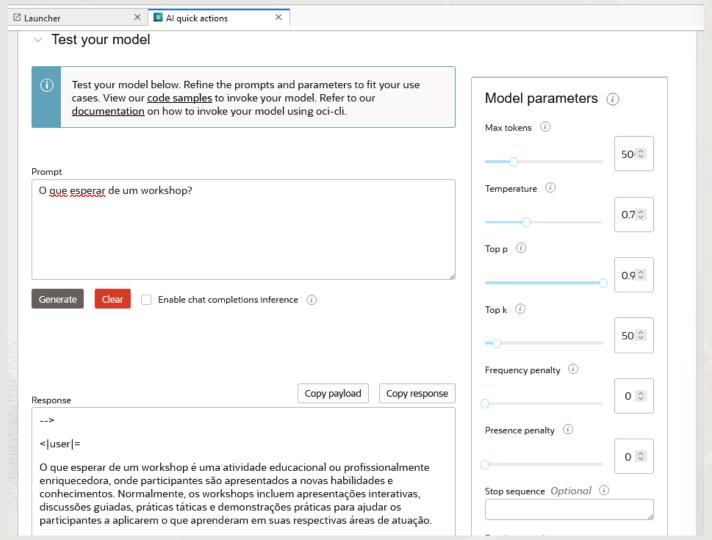
 General information 	
OCID:	ocid1.datascien Show Copy
Endpoint:	https://modelde <u>Show Copy</u>
Model name:	microsoft/Phi-3-mini-4k-instruct-gguf-fp16
Model deployment inference:	Invoke your model
Model deployment details:	modelDeployment_microsoft/Phi-3-mini_20250425 Open logs in terminal
Compute shape:	VM.Standard.A1.Flex (20 OCPUs, 128 GBs)
Instance count:	1
Model deploy predict endpoint:	/v1/completions
Lifecycle state:	Active
Lifecycle details:	Model Deployment is Active.
Log groups:	-
Log:	-



Passo 2: Deploy model



2.4 E rolando a página mais para baixo, será possível testar prompt com este modelo

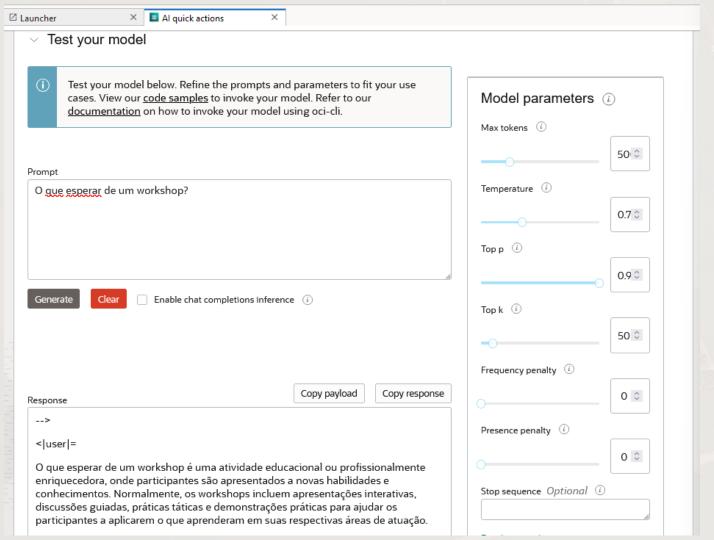




Passo 2: Deploy model



Mandar este print contendo um prompt específico e tmb data e hora





Obrigado

ORACLE