



AWS AI/ML

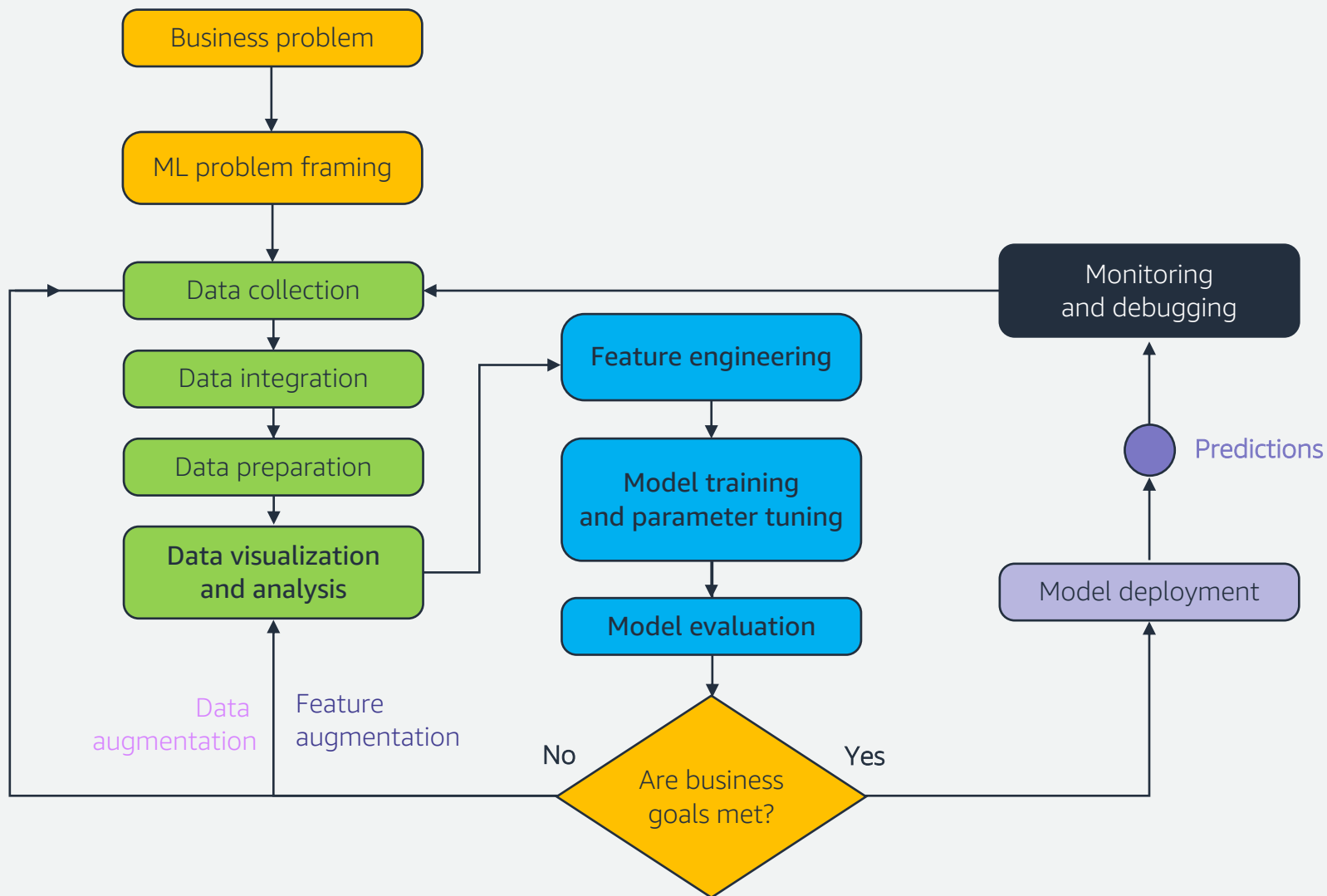
Gabriel Bella Martini

Arquiteto de Soluções AWS

Agenda

- 1- Introdução aos serviços de AI da AWS
- 2- Introdução ao SageMaker
- 3- Treinando modelos no SageMaker
- 4- Customizando o SageMaker

O processo de um projeto de ML



Infraestrutura de computação

Escolha de CPUs, GPUs e aceleradores para suas necessidades de desempenho e orçamento

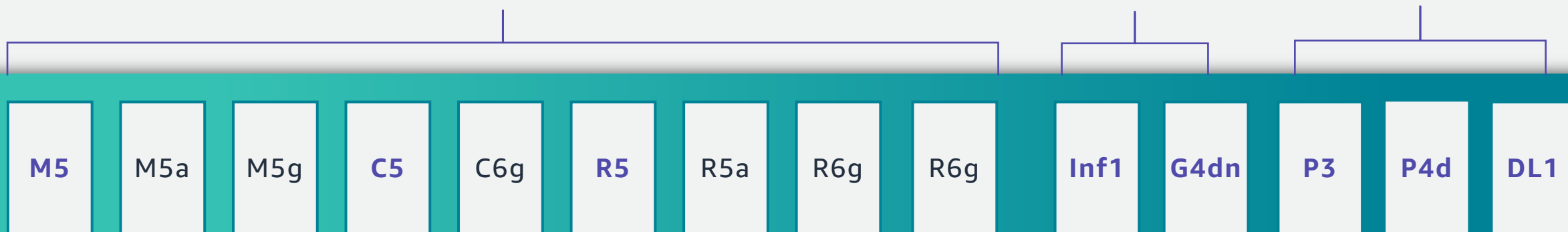
Traditional machine learning (ML)

Training and inference

Deep learning (DL)

Inference

Training



Cascade Lake CPU
Skylake CPU

Habana Gaudi accelerators



EPYC CPU



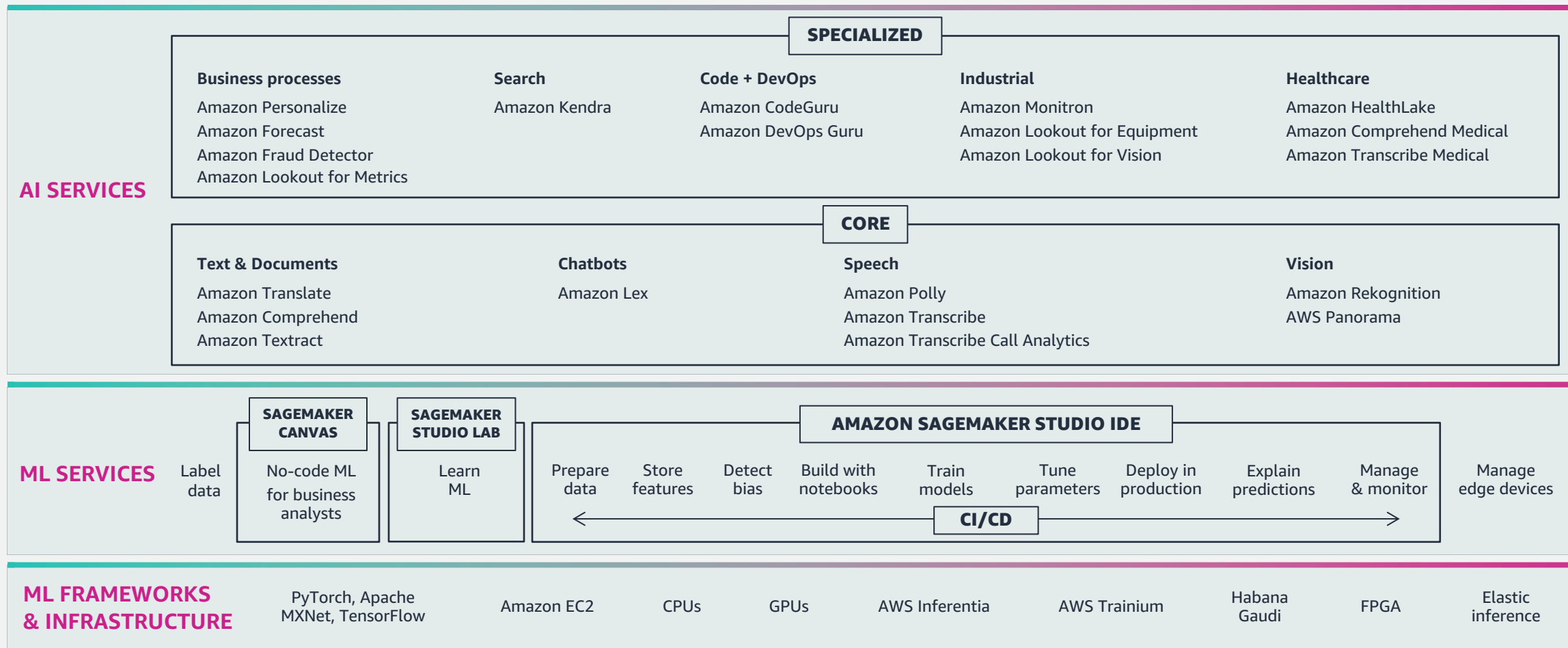
Graviton CPU
Inferentia chip



A100, V100, T4 GPUs

Serviços AI/ML na AWS

Conjunto mais amplo e completo de recursos de aprendizado de máquina



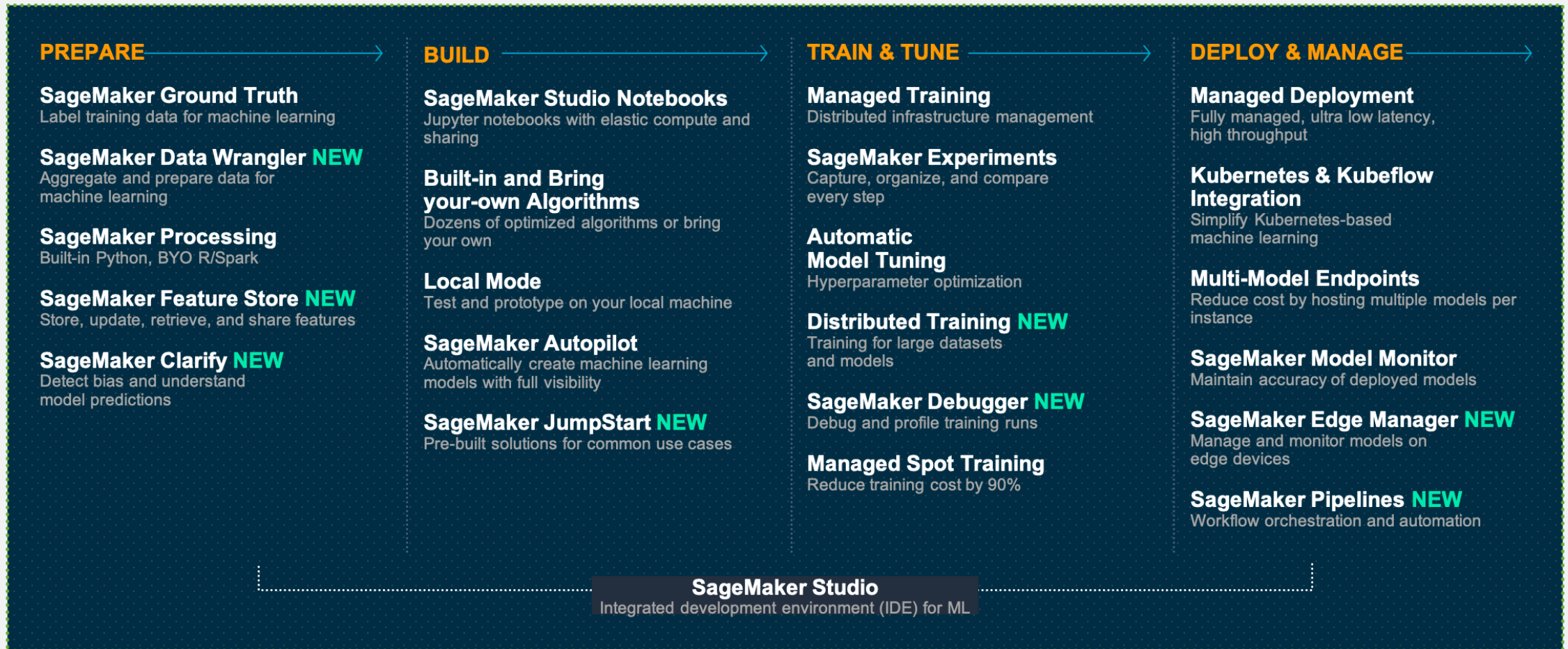
Serviços de IA

Labs: <https://github.com/gabrielmartinigit/aiml-notebooks>

SageMaker

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Amazon SageMaker



Tipos de Treinamento



ML
Marketplace



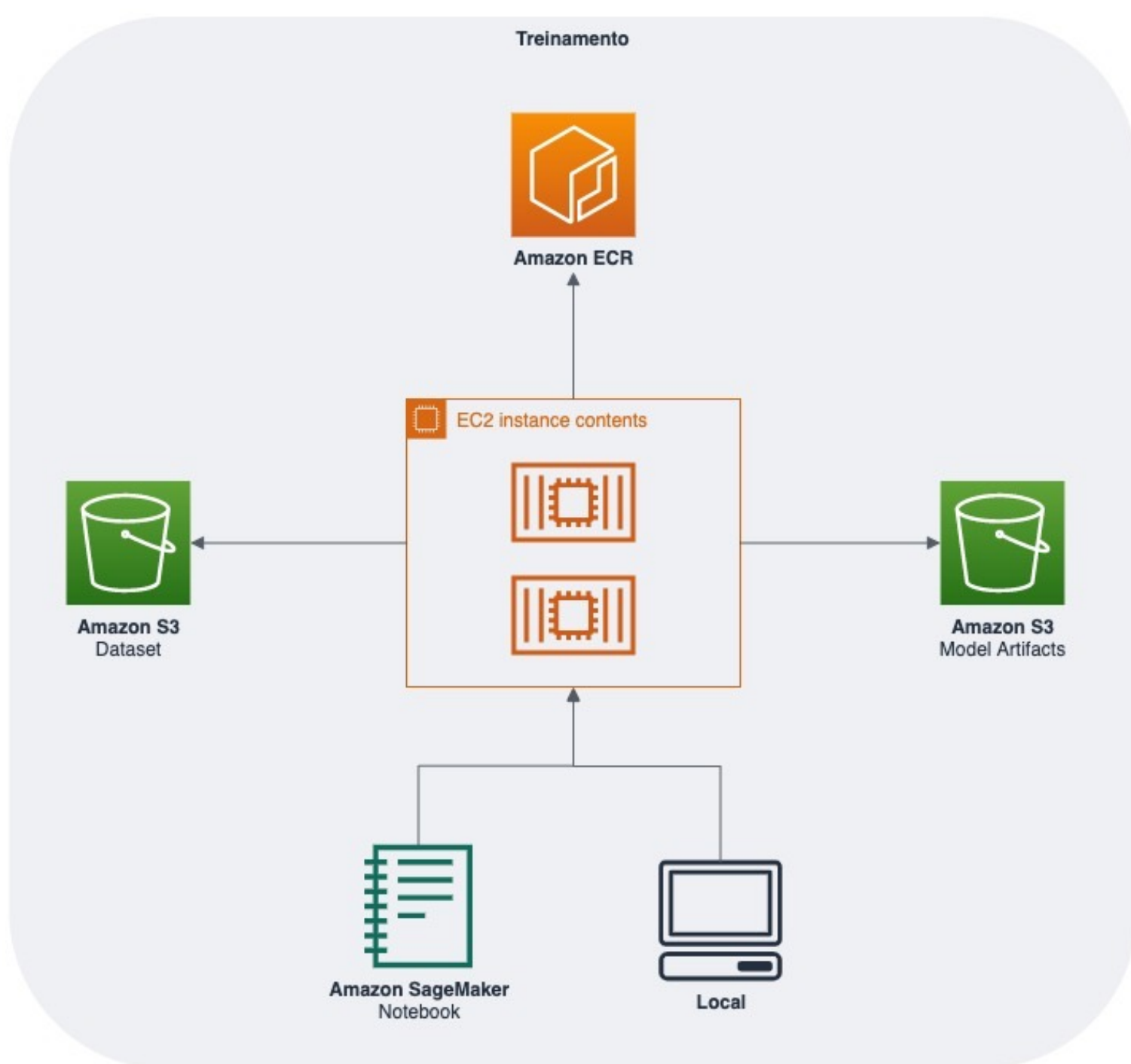
Algoritmos
Built-in

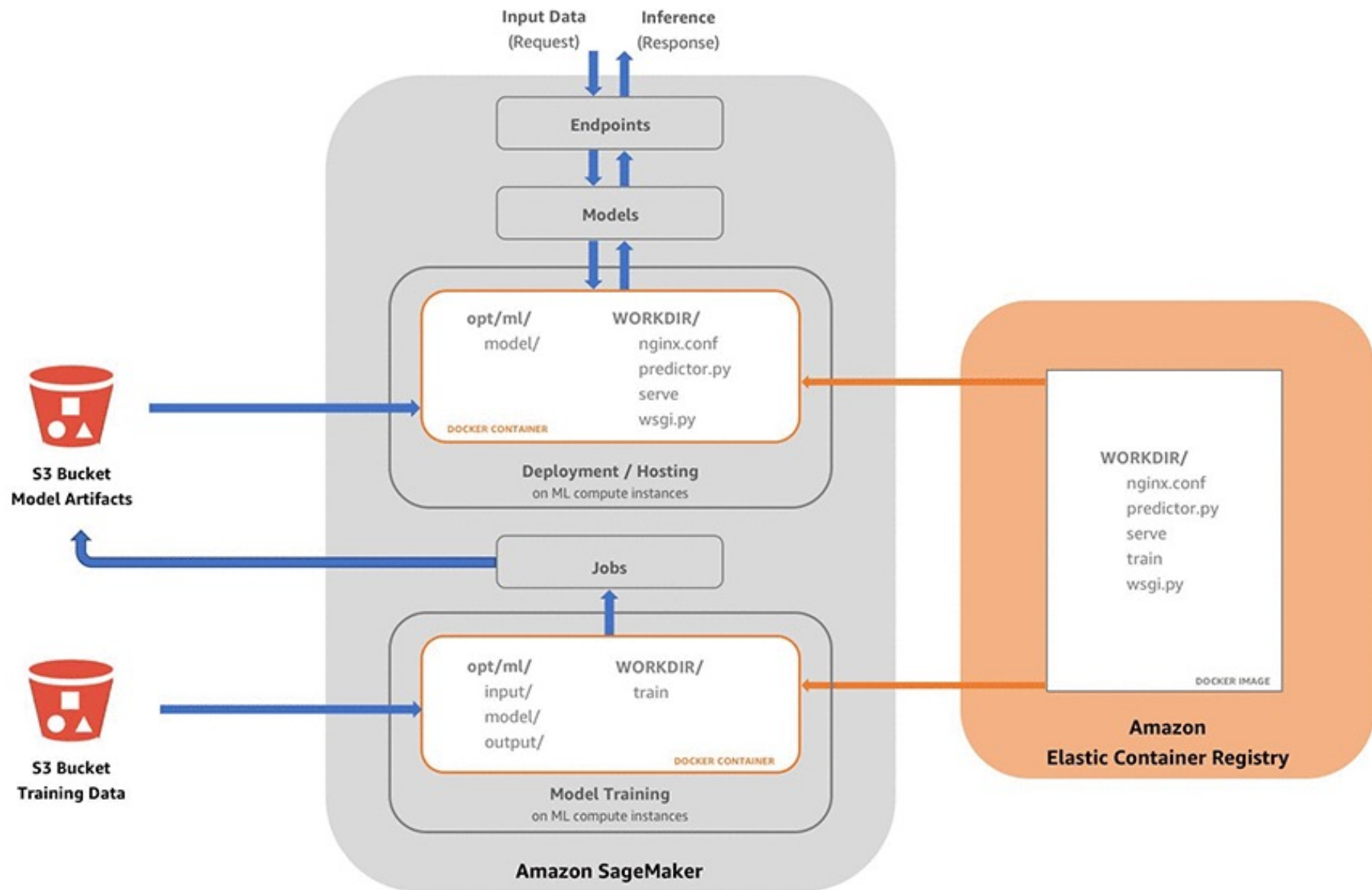


Script
Mode









Custom
Container



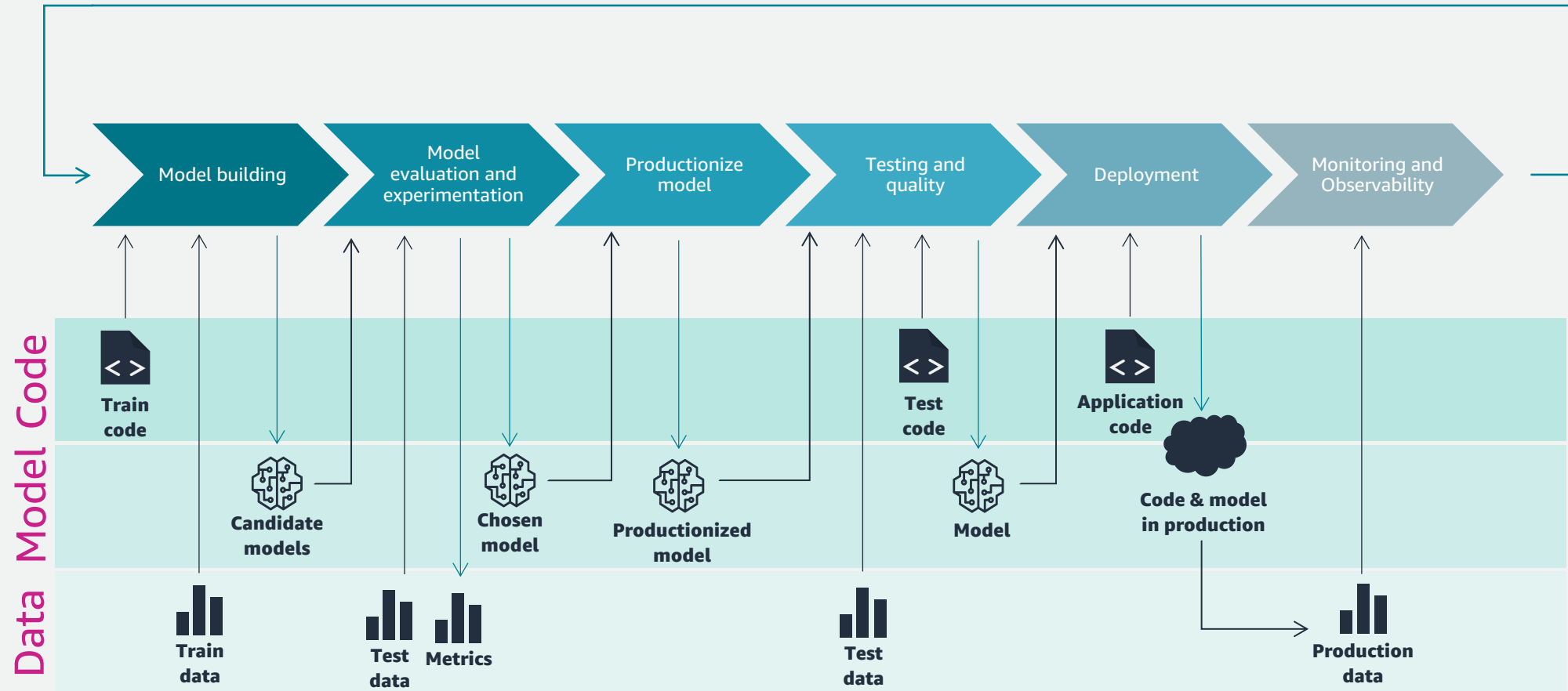


MLOps

AWS MLOPS whitepaper: <https://d1.awsstatic.com/whitepapers/mlops-continuous-delivery-machine-learning-on-aws.pdf>

	ROLE	PRIORITIES	NEEDS
	Data Scientist	Makes sense of data , generates and communicates insights to improve or create business processes, creates predictive ML models to support them	<ul style="list-style-type: none"> • Data access • ML compute environments • Robust ML tools
	Data Engineer	Builds scalable pipelines , transforms and loads data into structures complete with metadata that can be readily consumed by the Data Scientist	<ul style="list-style-type: none"> • Ad hoc querying • Quick visualization
	Security	Risk and Compliance across the enterprise. Prevent data leakages. Audit user activity. Detect model bias .	<ul style="list-style-type: none"> • Alerts – data leakages, breaches • Reports – data, user activities
	MLOps / ML Engineer	Monitoring for reliability , quickly diagnose deployment or availability issues	<ul style="list-style-type: none"> • Data drift, Model drift • Dashboards
	SysOps Engineer	Provision the right infrastructure for the right team without incurring idle resources expenses	<ul style="list-style-type: none"> • Capacity planning • Resource usage • Governance at scale
	Business Sponsor	Vetting the prioritization and ROI , funding projects, providing ongoing feedback	<ul style="list-style-type: none"> • Reporting • Results • Dashboards

Gerenciamento do ciclo de vida de ML



Estudar AI/ML na AWS

- Machine Learning University: <https://www.youtube.com/channel/UC12LqygTQYbXatYS9AA7Nuw>
- AWS Skill Builder: <https://explore.skillbuilder.aws/lms/>
- SageMaker Studio Lab: <https://studiolab.sagemaker.aws/>



Obrigado!

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