Progettare e rilasciare flussi MLOps su AWS

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beSharp spa

beSharp is an **Italian Premier AWS Partner**, whose core business consists in migrating its customers on **AWS**

https://www.besharp.it/

Materiale in parte da

https://github.com/xtreamsrl/amld22-mlops-on-aws

Collaborazione con Xstream srl

Outline

ML ed MLOps

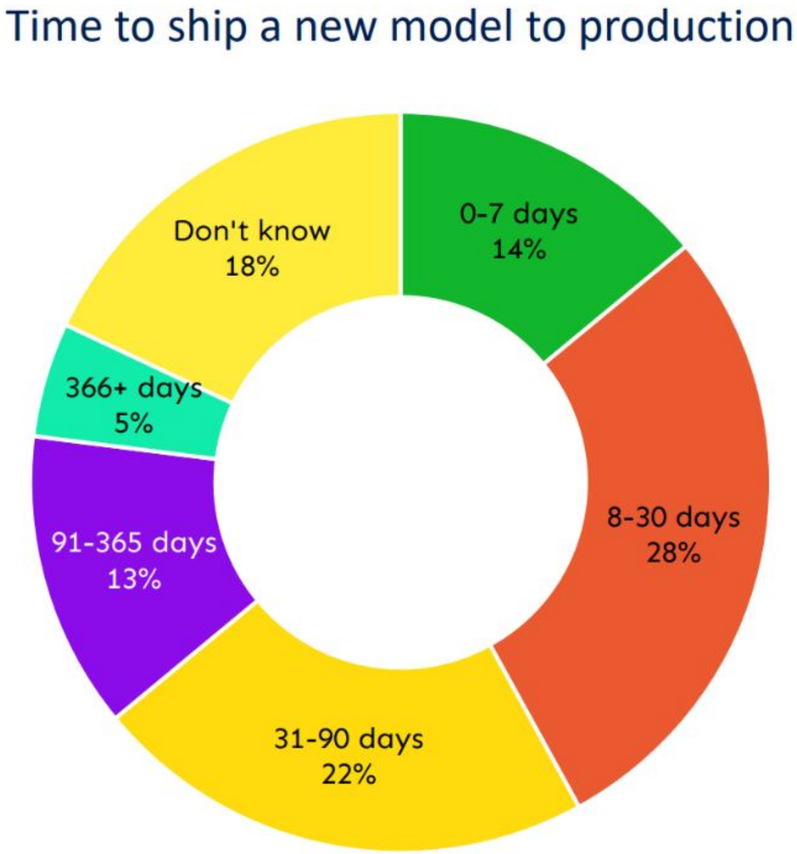
AWS introduzione

MLOps su AWS

Un esempio pratico

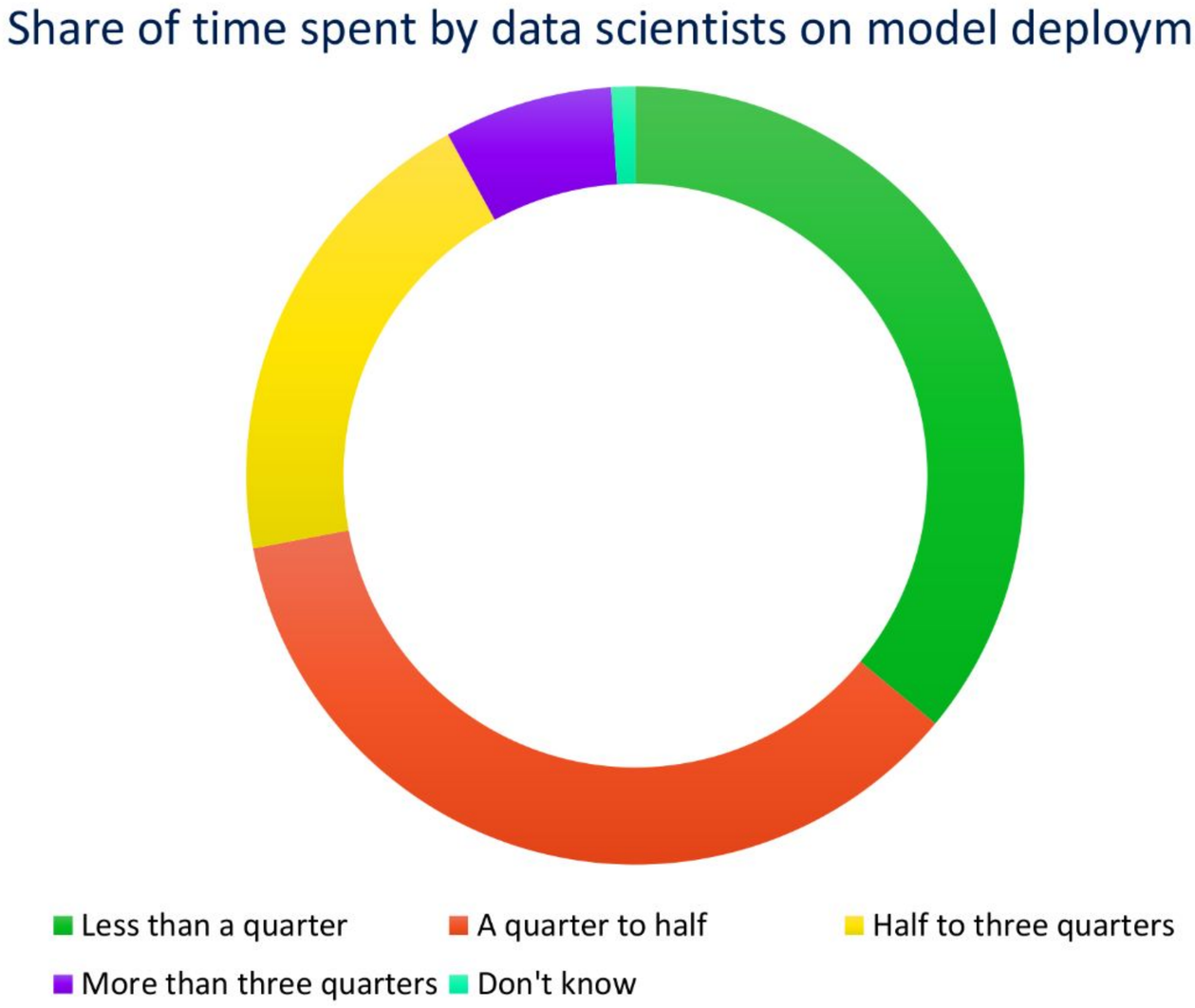
Conclusioni

ML Development is slow

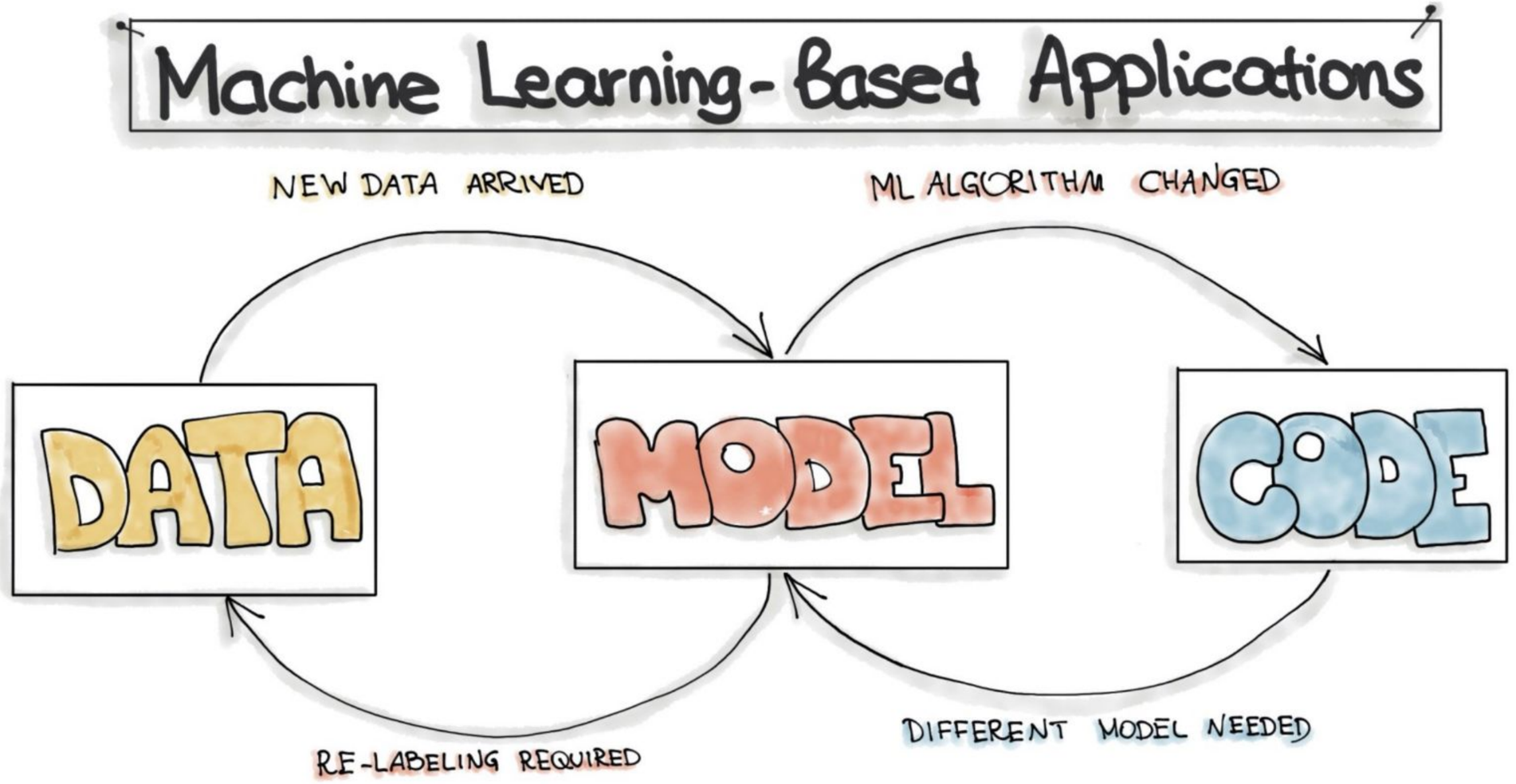


Algorithmia, State of Enterprise ML, 2020

ML Deployment is time-consuming



Updates cascade



The Machine Learning process

1. Business Understanding

- Problem statement
- Evaluation metrics
- Literature review

2. Data Gathering

- Source discovery
- Data preparation
- Quality assessment

3. Data Exploration

- Explorative analysis
- Data cleaning

4. Modelling

- Feature engineering
- Model design
- Model implementation

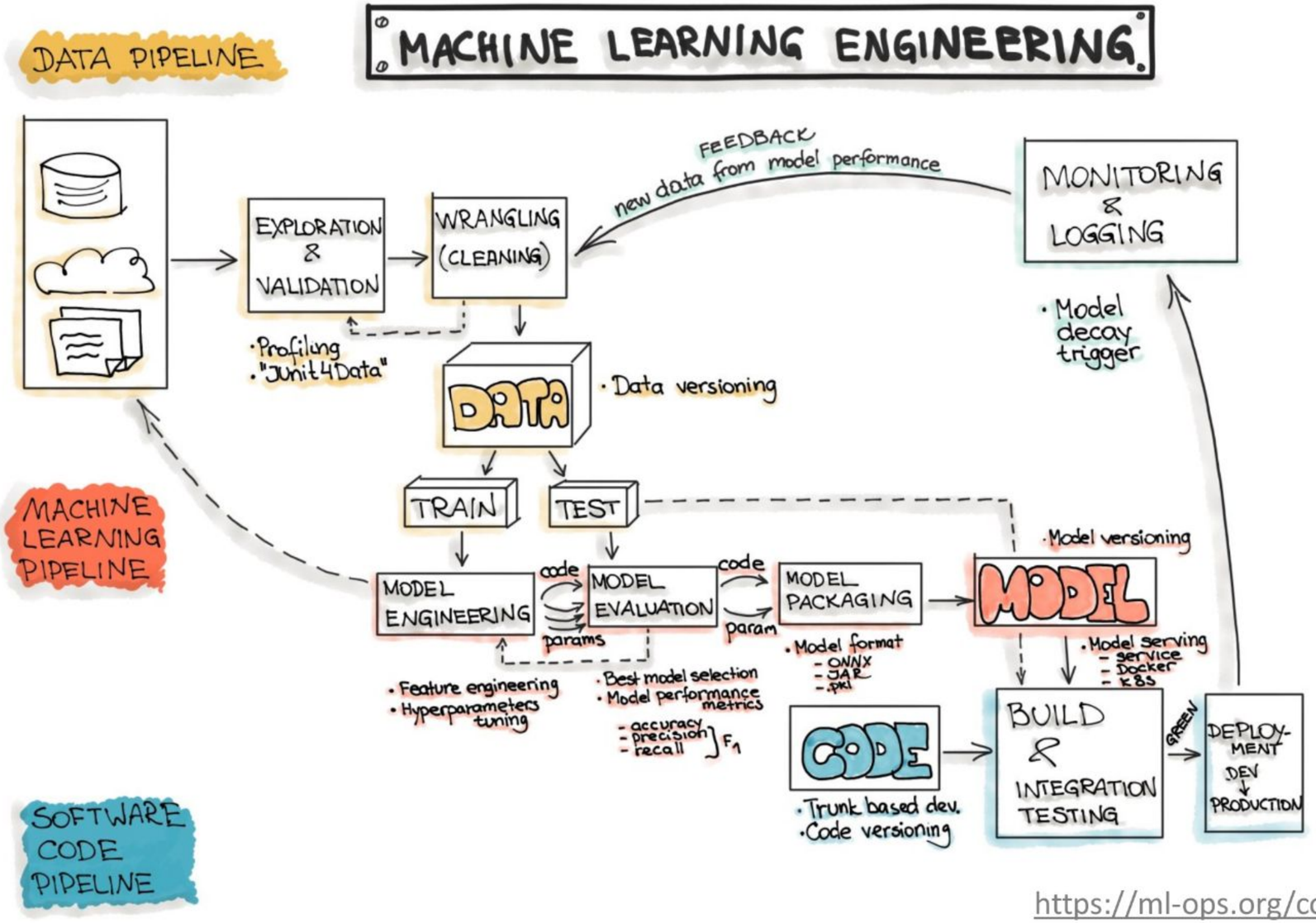
5. Evaluation

- Performance evaluation
- Time evaluation

6. Deployment

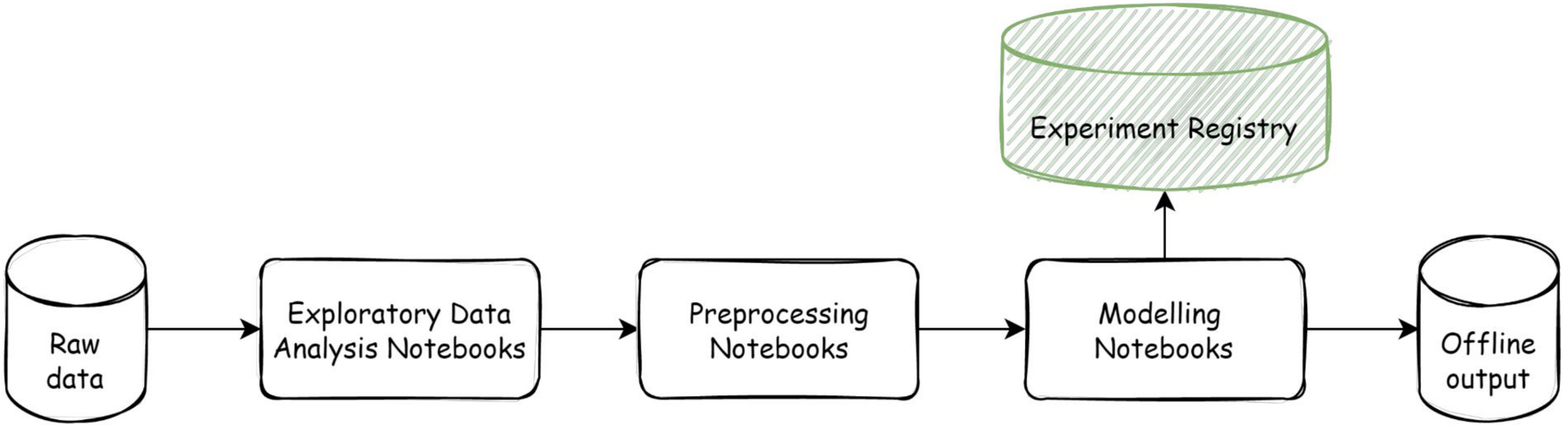
- Architecture design
- Execution scheduling
- Performance tuning
- Integration

The Machine Learning process

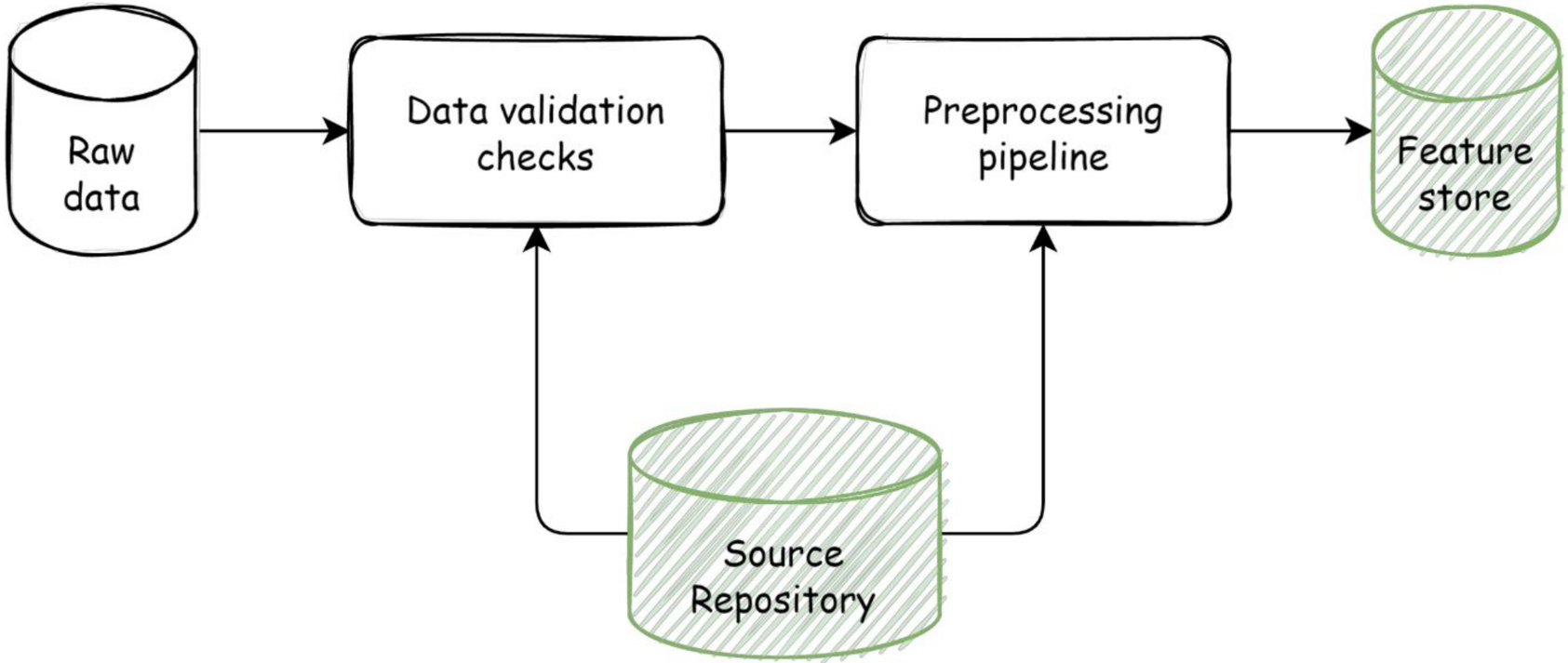


https://ml-ops.org/content/end-to-end-ml-workflow

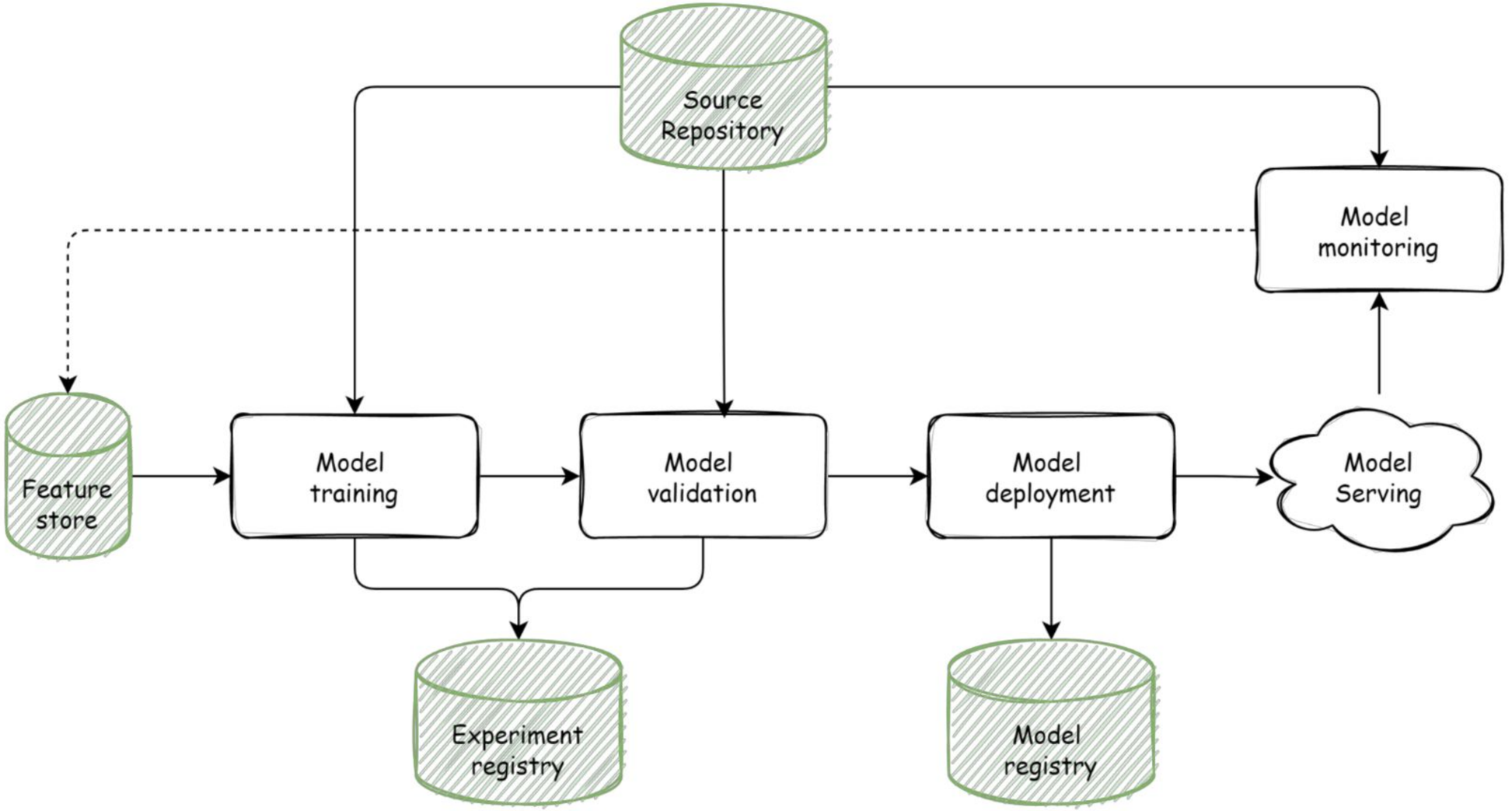
Offline development



Automated data pre-processing

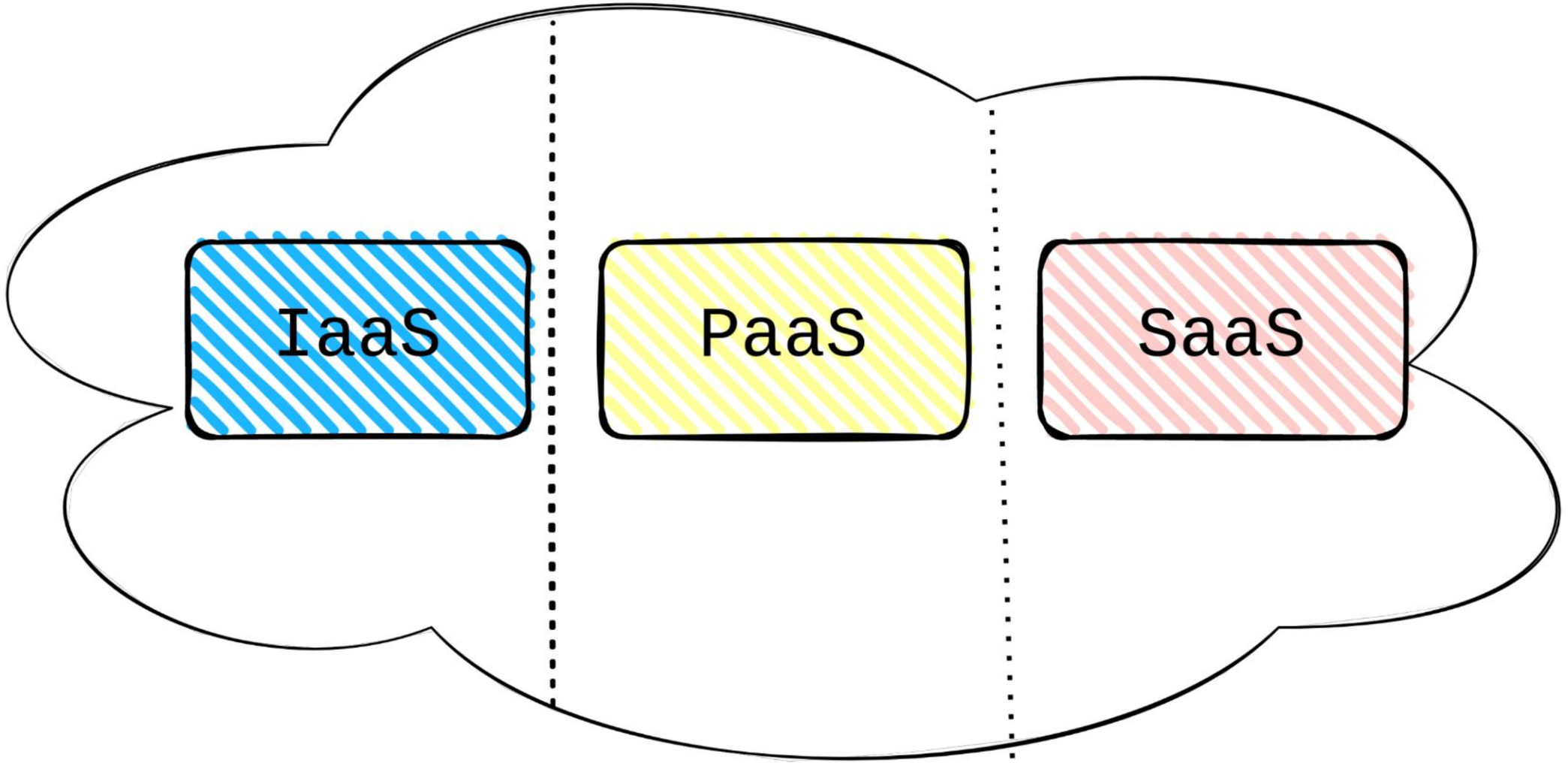


Automated model lifecycle

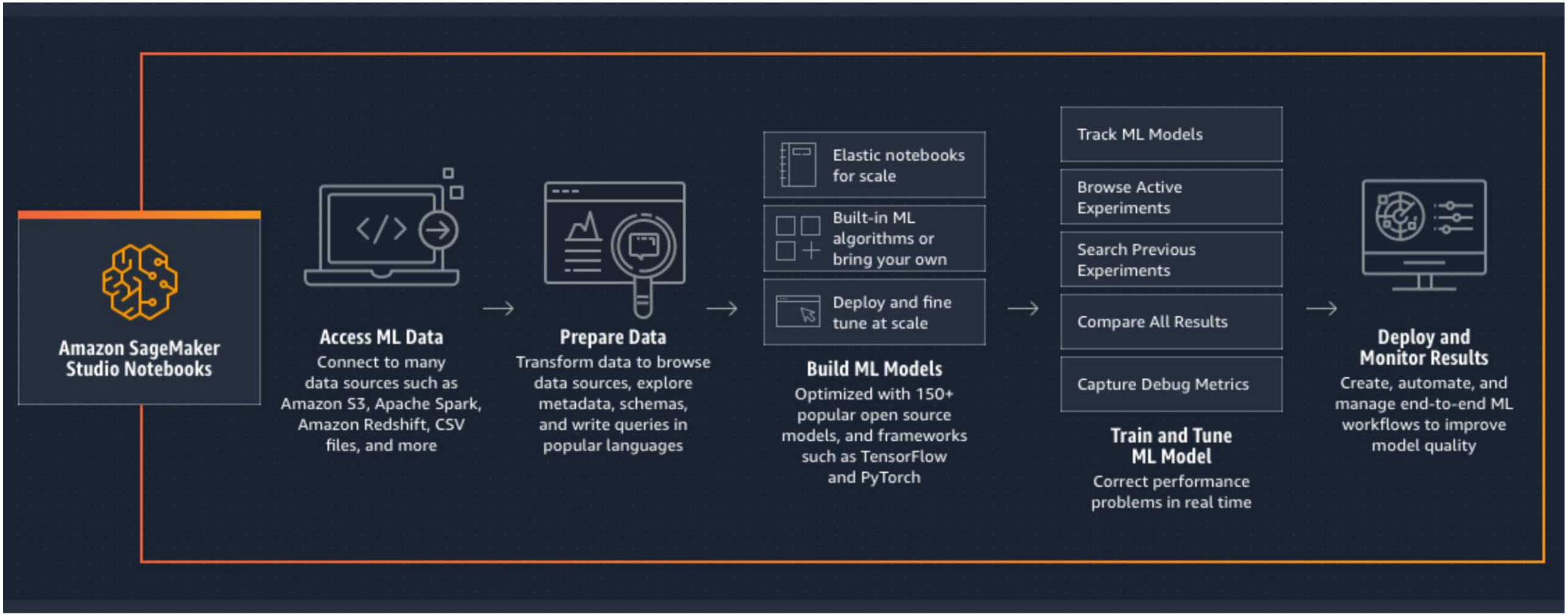


AWS Cloud

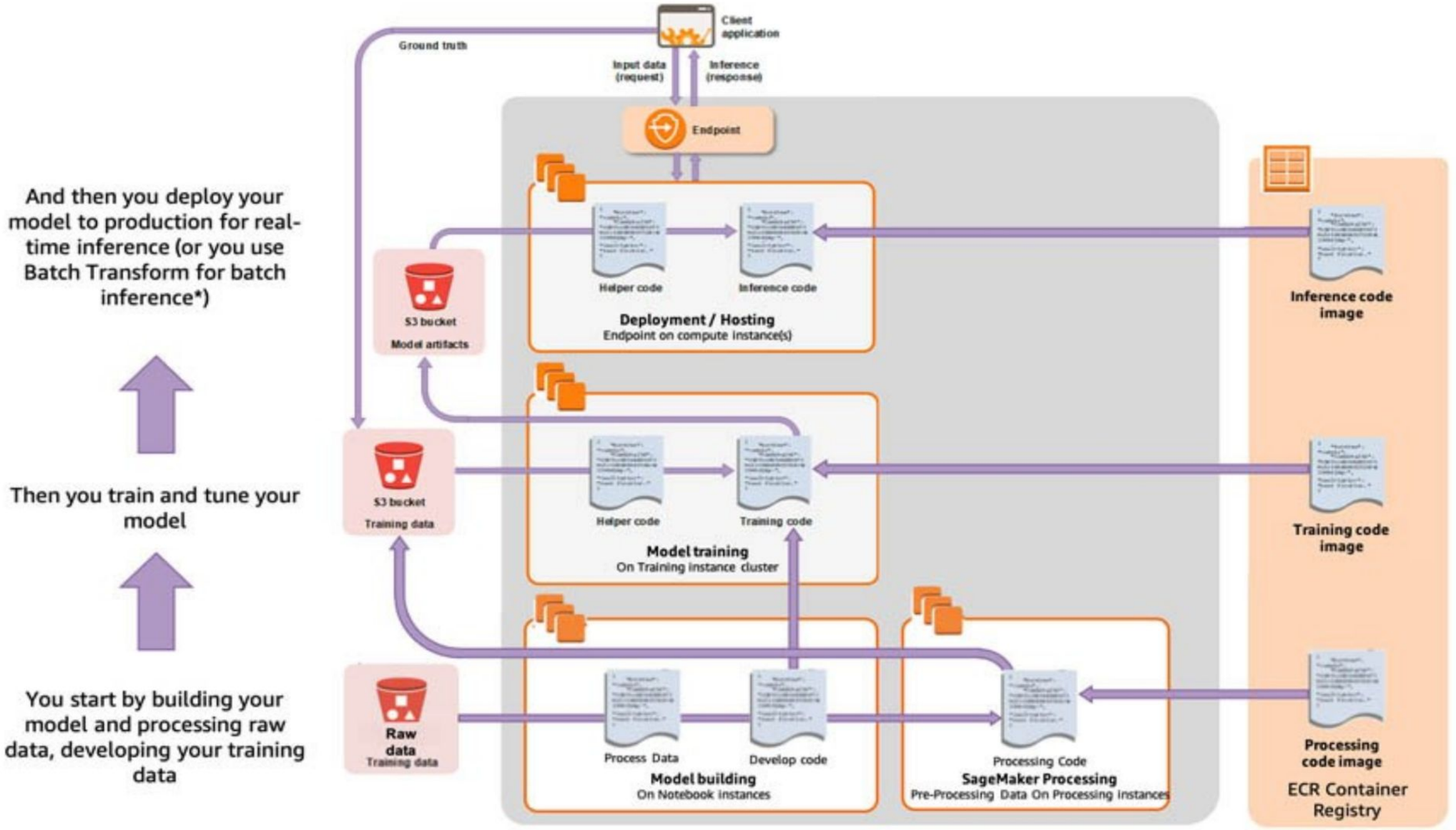
AWS Cloud basics



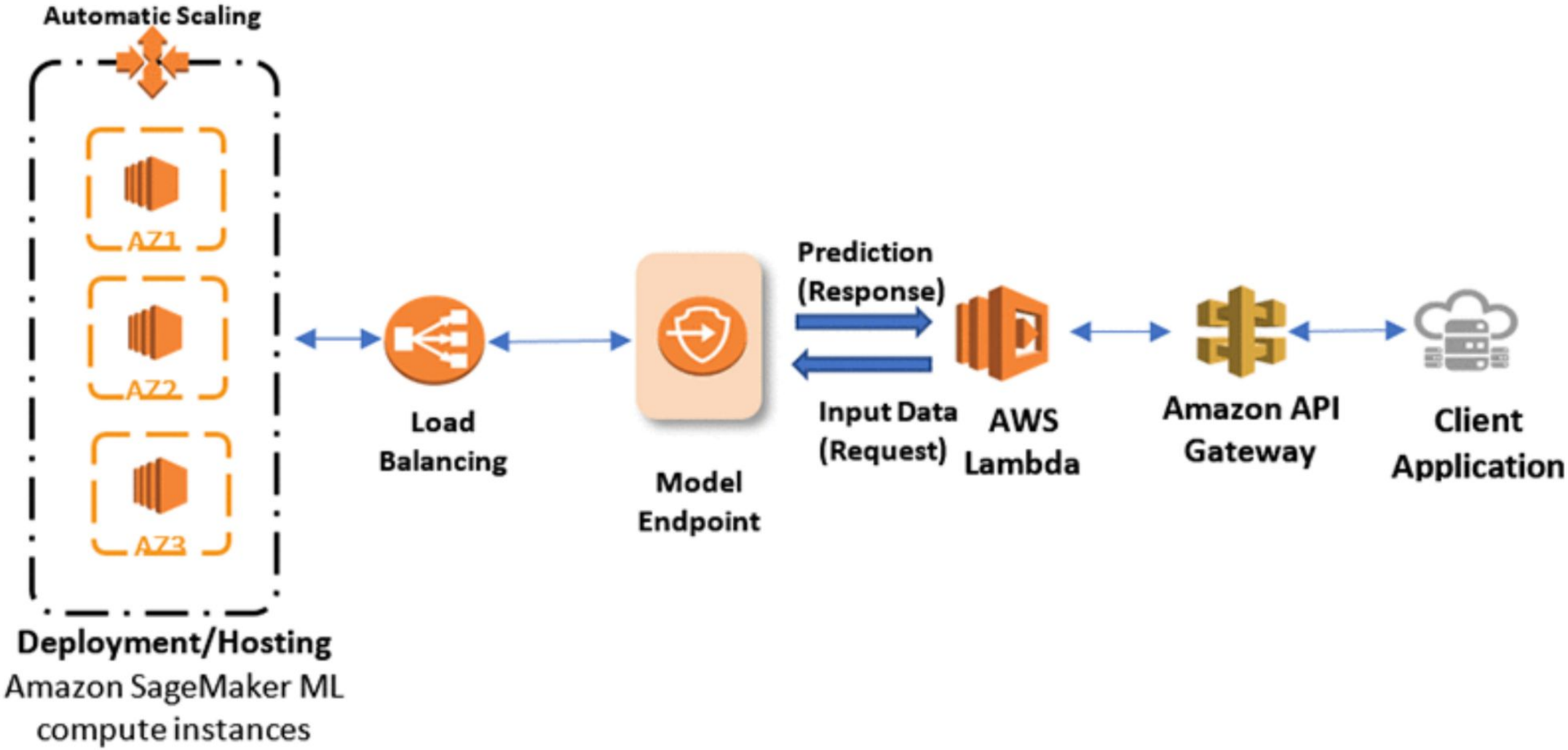
Sagemaker Components



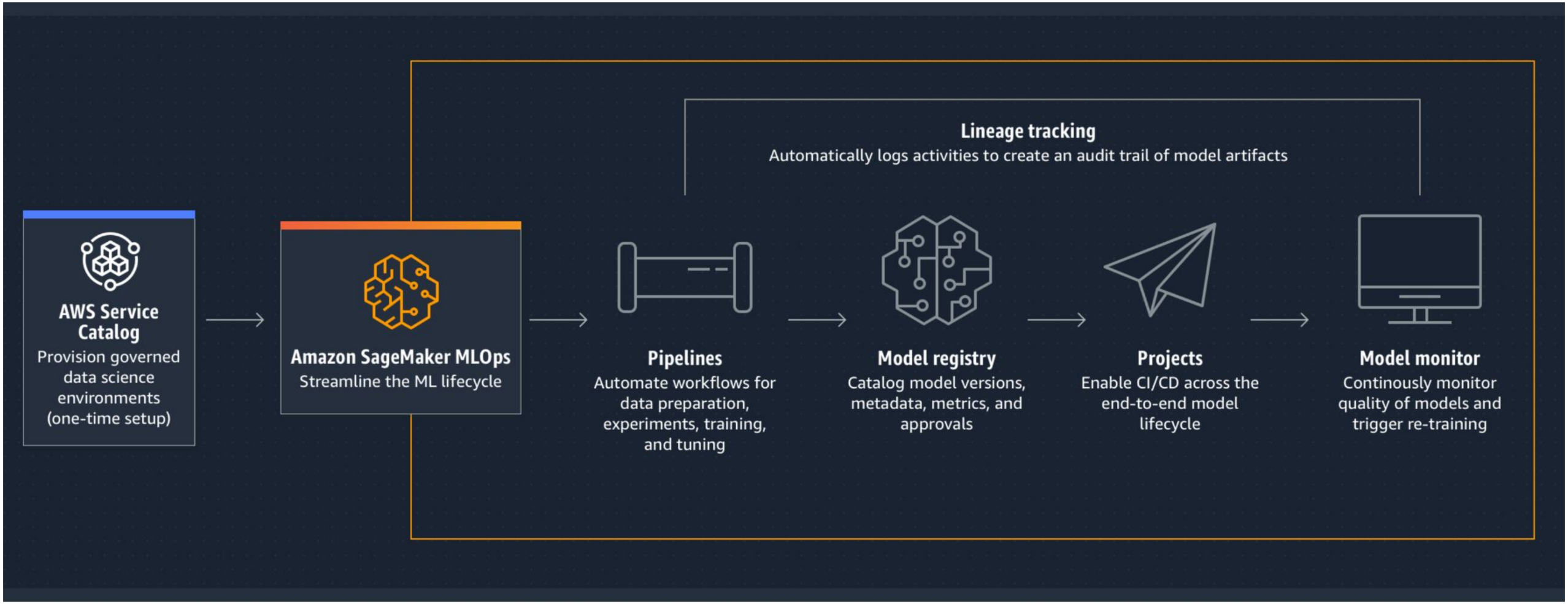
Sagemaker Training



Sagemaker Endpoint



AWS MLOps: Sagemaker Studio




Check the billing!!
Always.
All the time.

https://github.com/besharpsrl/insubria_MLops_2022

Questions?