

ML Pipeline Architecture

Continuous Integration

For the data processing part, I chose to store the raw data in S3 buckets, the advantage is scalability and low cost.

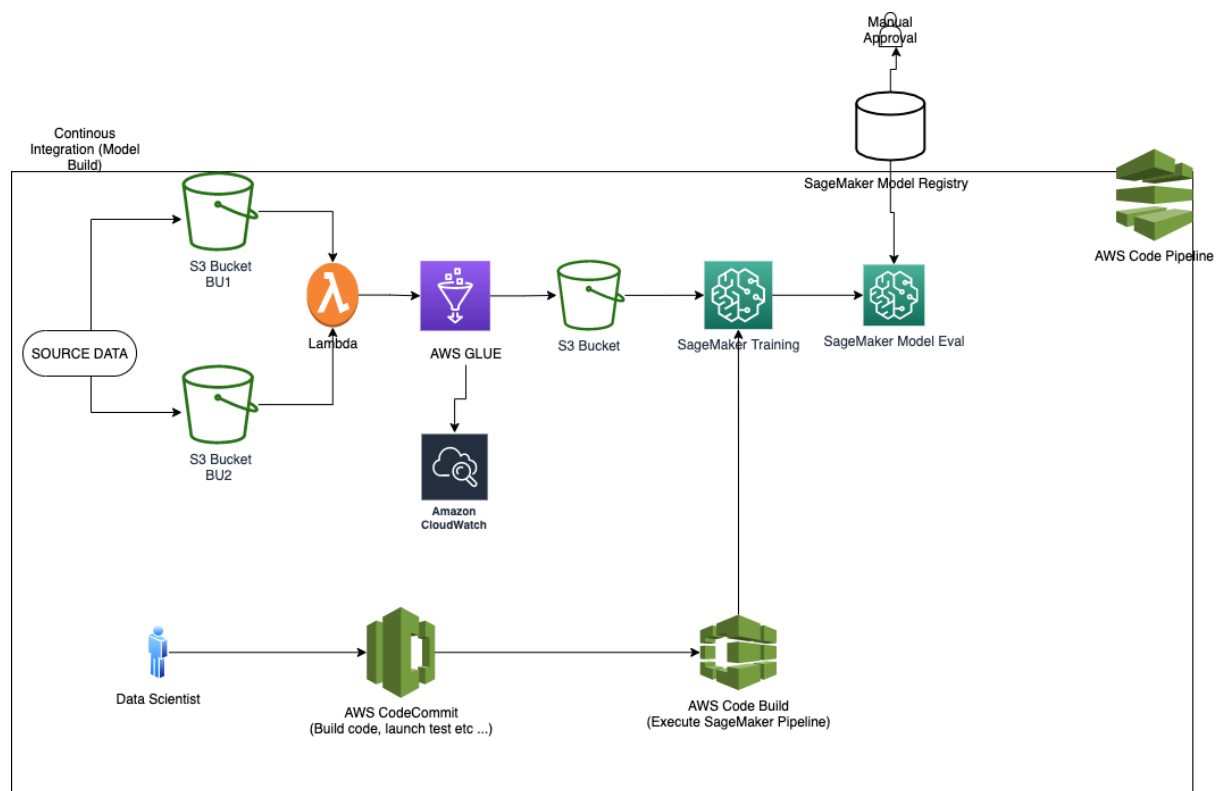
Then lambda functions that will be triggered when new data is added.

We will use AWS Glue for the processing of the data, the advantage is the great scalability capable of having different workers that process different partitions of data stored on S3.

The processed data will be stored on an S3 bucket or a database or other, depending on the need.

The training part will be managed by AWS SageMaker which allows to train, store, manage the life cycle, eval and deploy the models.

For the repository, we will use AWS Code Commit, which will launch the CI steps (tests, static analysis, package creation, etc.), then AWS Code Build to launch the pipeline.



Continuous Deployment

For the deployment part, we will use code build to create the release pipeline and build the cloud deployment template Formation, then we will deploy the model on SageMaker endpoints both in staging and in production.

We will use cloud watch to define metrics to follow and potentially drift metrics.

Continuous Deployment (Model Deployment)

