# MLops

Make life easy

# Common problems with scaling ML

Getting started

Mundane steps with lots of boilerplate

Iterating quickly

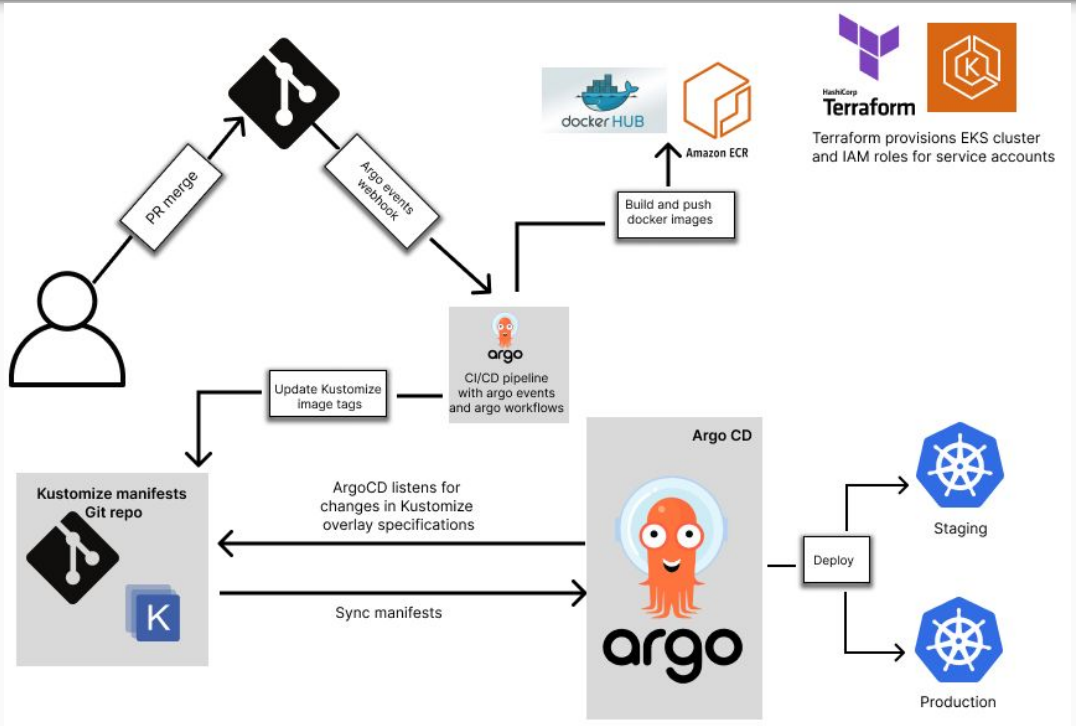
Slow redundant iterative development

Hard to experiment and compare different models/algorithms

Productionizing

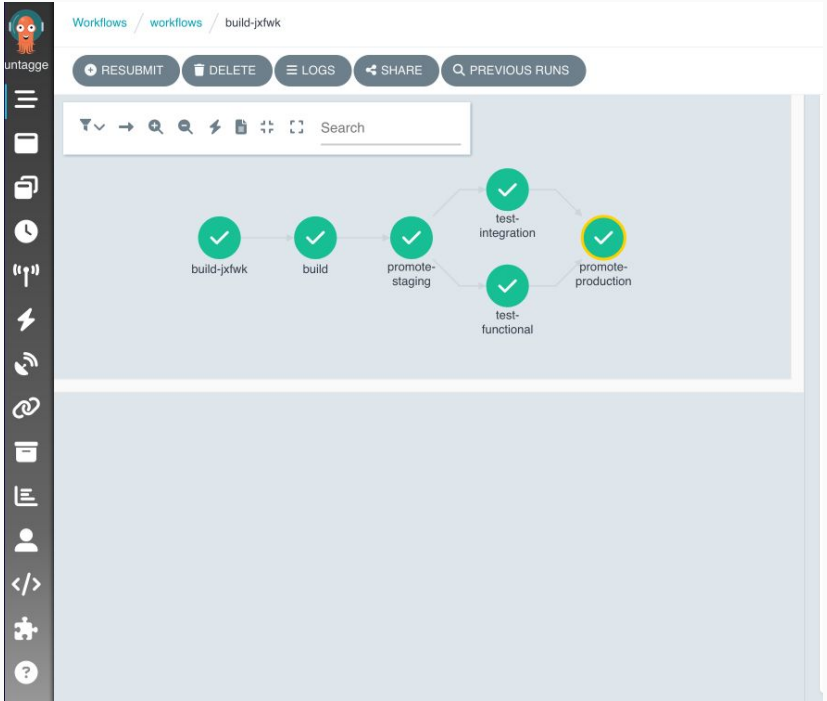
Incorporating ML models into production backend and handing off to engineers is very manual and bottlenecked

# Gitops CI/CD for any software product



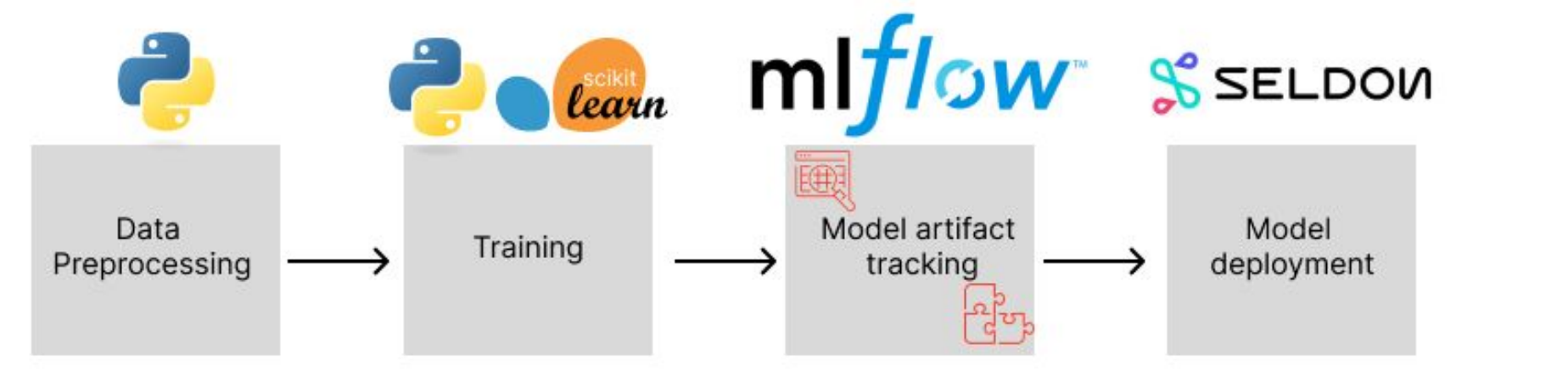
# Argo workflows for CI/CD

1. Team makes change to MERN stack application and makes a Github PR
2. Github sends a webhook POST request to Argo event source
3. The CICD workflow trigger source is started
4. Docker image is built for frontend and backend and pushed to docker registry
5. New image tags are updated in Kustomization.yaml file
6. ArgoCD picks this up and updates the deployment
7. Integration tests can be carried out in the staging environment to test that APIs endpoints can be reached and they return the expected results.
8. If all goes well, then we can update manifests in the production cluster

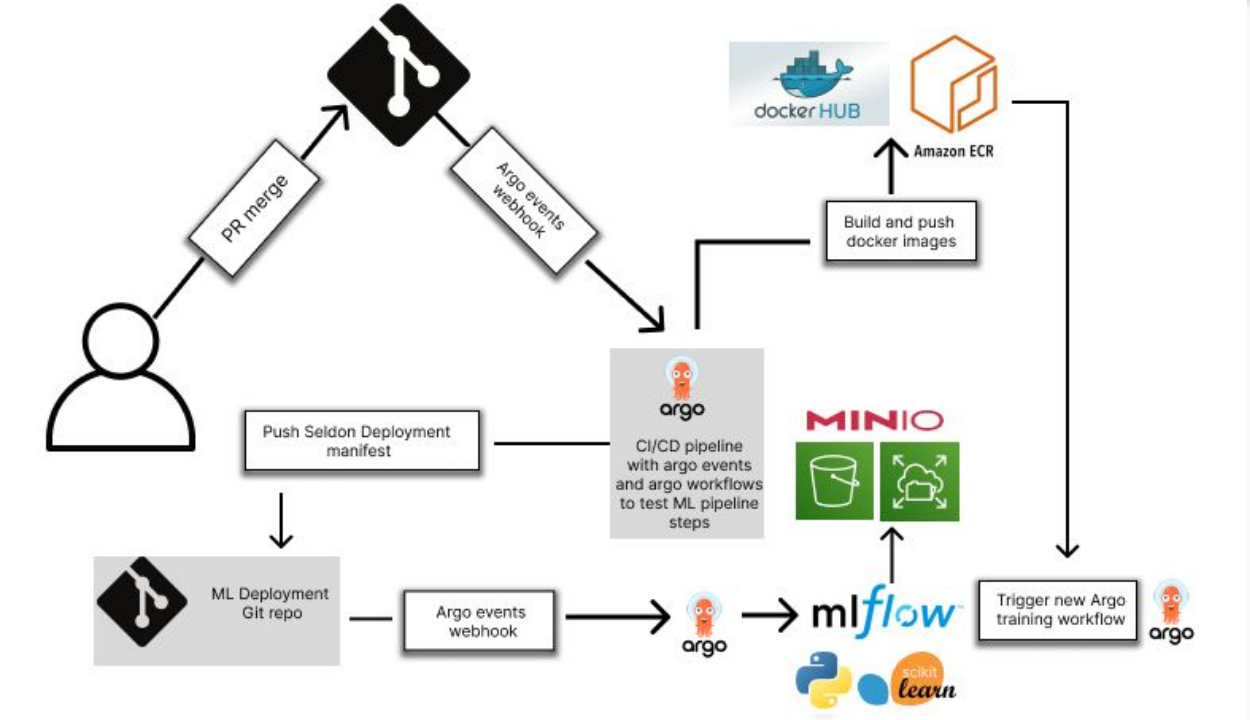


# CI/CD for ML pipelines

# Machine learning as composable units



# CI/CD for ML training pipeline



# CICD of the inference pipeline