MLOps

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Contents

1 Introduction

- Deployment of deep learning models in an API
- Deploying services to Kubernetes with Docker
- Version Controlling with Git (to blame those who ruined the code)
- Automation pipelines to prepare data, train models and deploy applications
  - Automated delivery (ready to deploy)
  - Automated deployment (CI / CD)

1.1 Why do I need deployment automation

- Save time
- Increased accuracy
- Better documentation
- Autoscaling

1.2 What will we do

- Object classification with a CNN
- Deployed with FastAPI
- Scalable with Kubernetes
- Automated with CI/CD pipelines
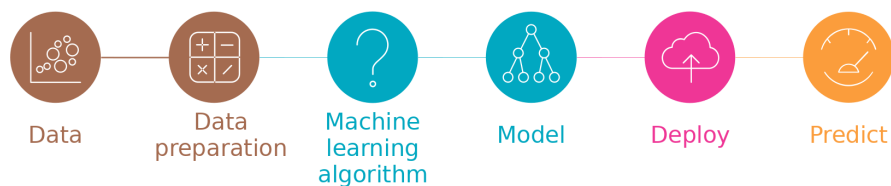 - Yes, also automated AI Training!

1.3 The AI pipeline

Figure 1: The complete AI pipeline

1.4 Teleport

How to connect to your dedicated virtual machine? **Teleport** allows engineers and security professionals to unify access for SSH servers, Kubernetes clusters, web applications, and databases across all environments.

1.4.1 Teleport Server Access

- One centralized login and user-management system
- Randomly generated passwords for your user account
- We manage all virtual machines your use can access

To **install and use Teleport**, see Leho.

2 FastAPI

TODO

3 Docker

TODO