

# EMOFY

## Development of a distributed AI training scheme

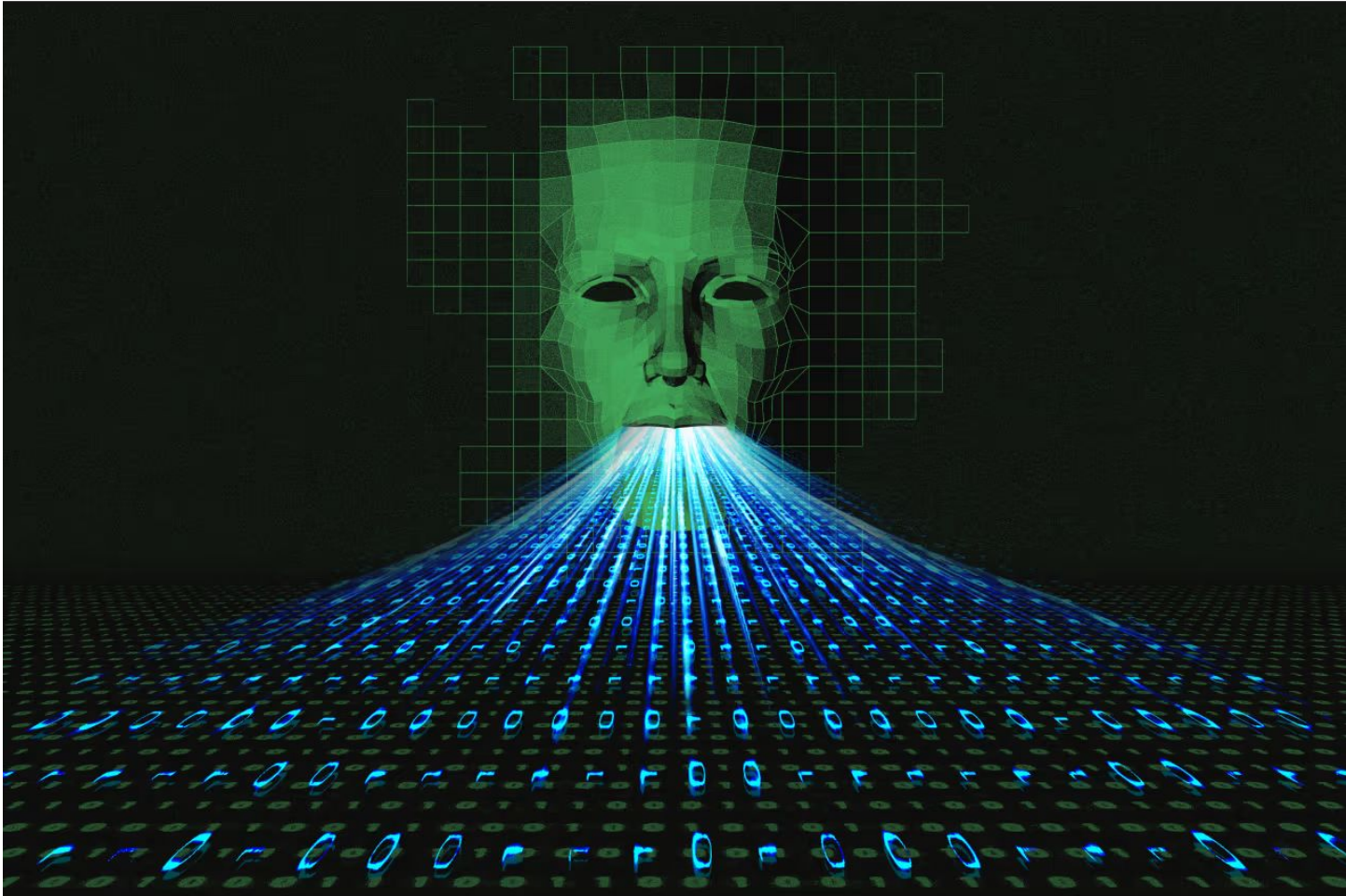


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## The general idea

Artificial intelligence today is in need of more and more data



## Problem

To produce high quality datasets, few people have to label a lot of data!



The predicted emotion is happy. Select the correct one!

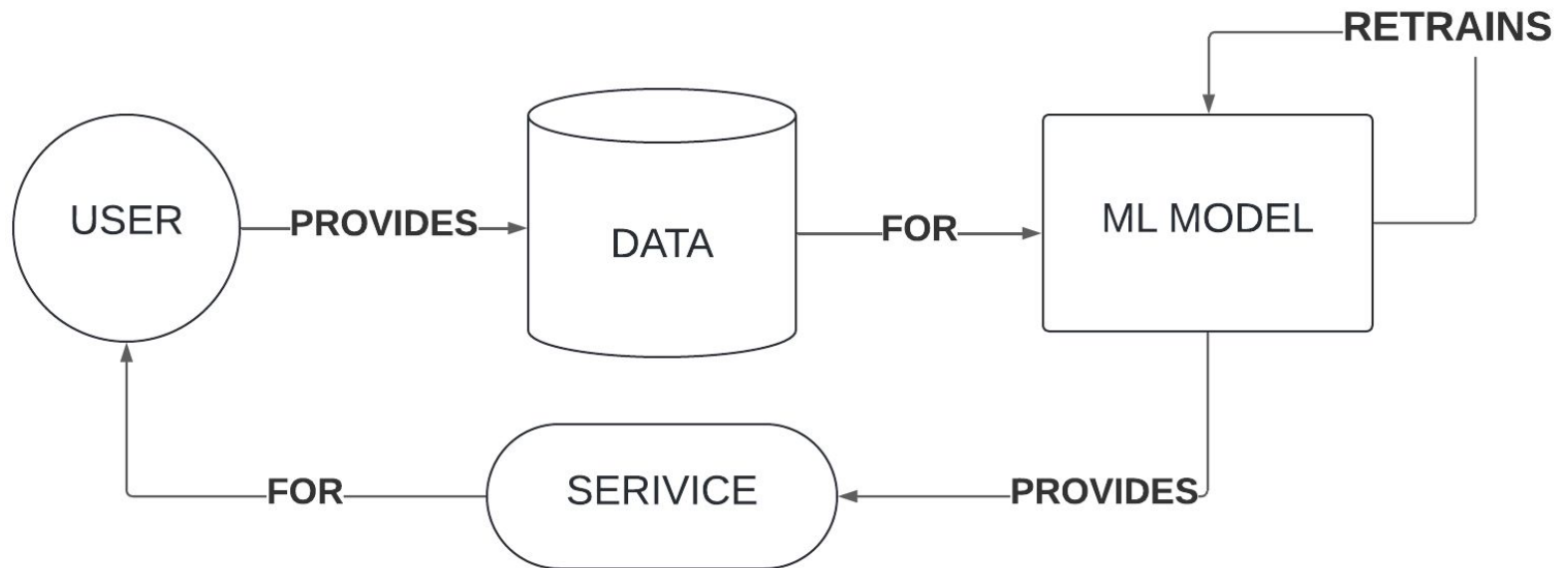
## Solution

A lot of people provide few labeled data

## The general idea

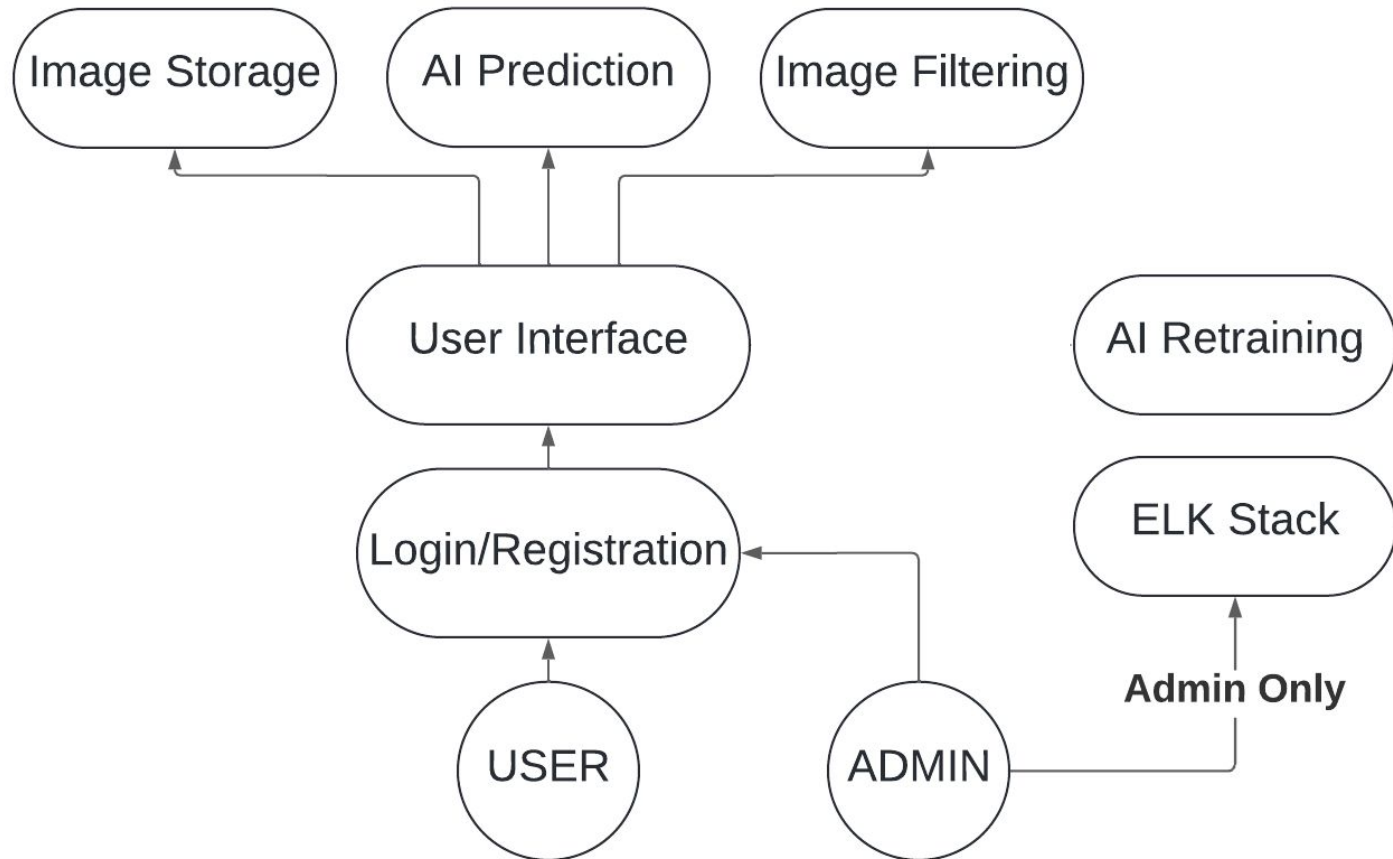
How to ethically extract this data in a challenging context?

- User consent
- Case of sensible data: biometric information
- Solution, get the users' collaboration



# The architecture

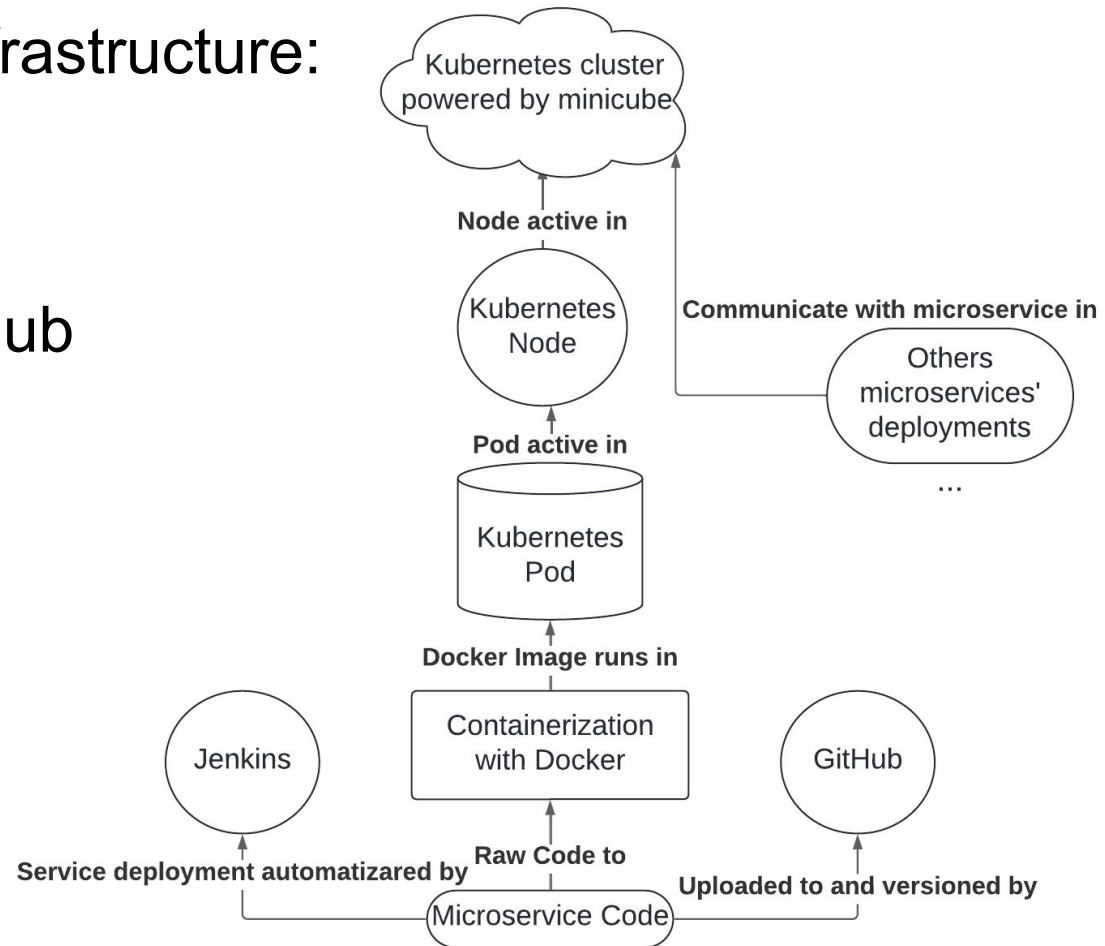
Architecture composed of a set of microservices



# The technologies used

## Three main layers of EMOFY

- DevOps/Work infrastructure:
- Docker
- Kubernetes
- Jenkins and GitHub





# Why EMOFY?

- Distributed architecture
- Persistent and efficient data storing
- Intuitive and fun for the users
- Monitor user activity using thanks to the ELK Stack

```
Sep 10, 2024 @ 14:54:20.065 message [EMOFY] User 1 retrieved all the images @timestamp Sep 10, 2024 @ 14:54:20.065 @version 1 data_stream.dataset generic data_stream.namespace default data_stream.type logs level INFO level_value 20,000 logger_name com.example.eis.controller.FileController thread_name http-nio-8080-exec-5 _id hHj_25EB0ZJcRlJGzQYZ _index .ds-logs-generic-default-2024.09.10-000001 _score...

Sep 10, 2024 @ 14:54:06.988 message waitress-1q X processNameq X MainProcessq X processq K u. .}q(X nameq X servingq X msgq X0[EMOFY] : Emotion detected: {'emotion': 'happy'}q X argsq NX levelnameq X INFOq X levelnoq K X pathnameq X!/emotion_classification/server.pyq @timestamp Sep 10, 2024 @ 14:54:06.988 @version 1 data_stream.dataset generic data_stream.namespace default data_stream.type logs tags _jsonp...

Sep 10, 2024 @ 14:54:05.939 message waitress-3q X processNameq X MainProcessq X processq K u. ()q(X nameq X servingq X msgq X,[EMOFY] : Emotion detection request receivedq X argsq NX levelnameq X INFOq X levelnoq K X pathnameq X!/emotion_classification/server.pyq @timestamp Sep 10, 2024 @ 14:54:05.939 @version 1 data_stream.dataset generic data_stream.namespace default data_stream.type logs tags _jsonparsef...

Sep 10, 2024 @ 14:54:03.223 message [EMOFY] Image retrieved successfully by user 1: 00000191-dbfc-d77a-8b57-c1d381bc6c36 @timestamp Sep 10, 2024 @ 14:54:03.223 @version 1 data_stream.dataset generic data_stream.namespace default data_stream.type logs level INFO level_value 20,000 logger_name com.example.eis.controller.FileController thread_name http-nio-8080-exec-9 _id cHj_25EB0ZJcRlJGiwZ0 _index .ds-l...

Sep 10, 2024 @ 14:54:02.188 message waitress-3q X processNameq X MainProcessq X processq K u. .}q(X nameq X servingq X msgq X2[EMOFY] : Emotion detected: {'emotion': 'neutral'}q X argsq NX levelnameq X INFOq X levelnoq K X pathnameq X!/emotion_classification/server.pyq @timestamp Sep 10, 2024 @ 14:54:02.188 @version 1 data_stream.dataset generic data_stream.namespace default data_stream.type logs tags _js...

Sep 10, 2024 @ 14:54:01.928 message waitress-0q X processNameq X MainProcessq X processq K u. ()q(X nameq X servingq X msgq X,[EMOFY] : Emotion detection request receivedq X argsq NX levelnameq X INFOq X levelnoq K X pathnameq X!/emotion_classification/server.pyq @timestamp Sep 10, 2024 @ 14:54:01.928 @version 1 data_stream.dataset generic data_stream.namespace default data_stream.type logs tags _jsonparsef...

Sep 10, 2024 @ 14:54:01.810 message [EMOFY] Image retrieved successfully by user 1: 00000191-dbfc-d394-b526-4b8c01ec54a4 @timestamp Sep 10, 2024 @ 14:54:01.810 @version 1 data_stream.dataset generic data_stream.namespace default data_stream.type logs level INFO level_value 20,00
```