

SYSTÈME INTELLIGENT DE SURVEILLANCE DES INFRACTIONS ROUTIÈRES

Membres :

Eya

Gerda

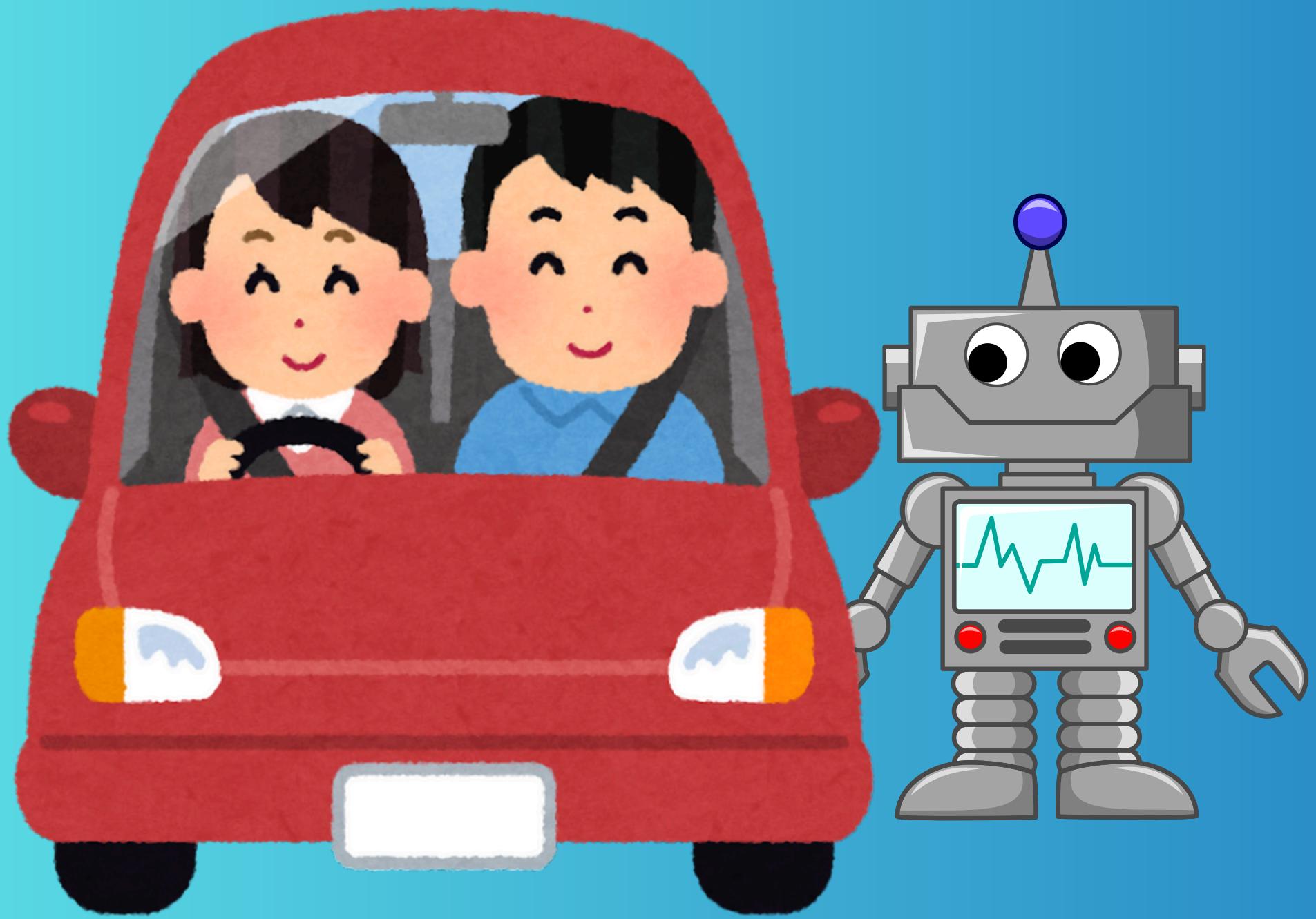
Codou

2023-2024

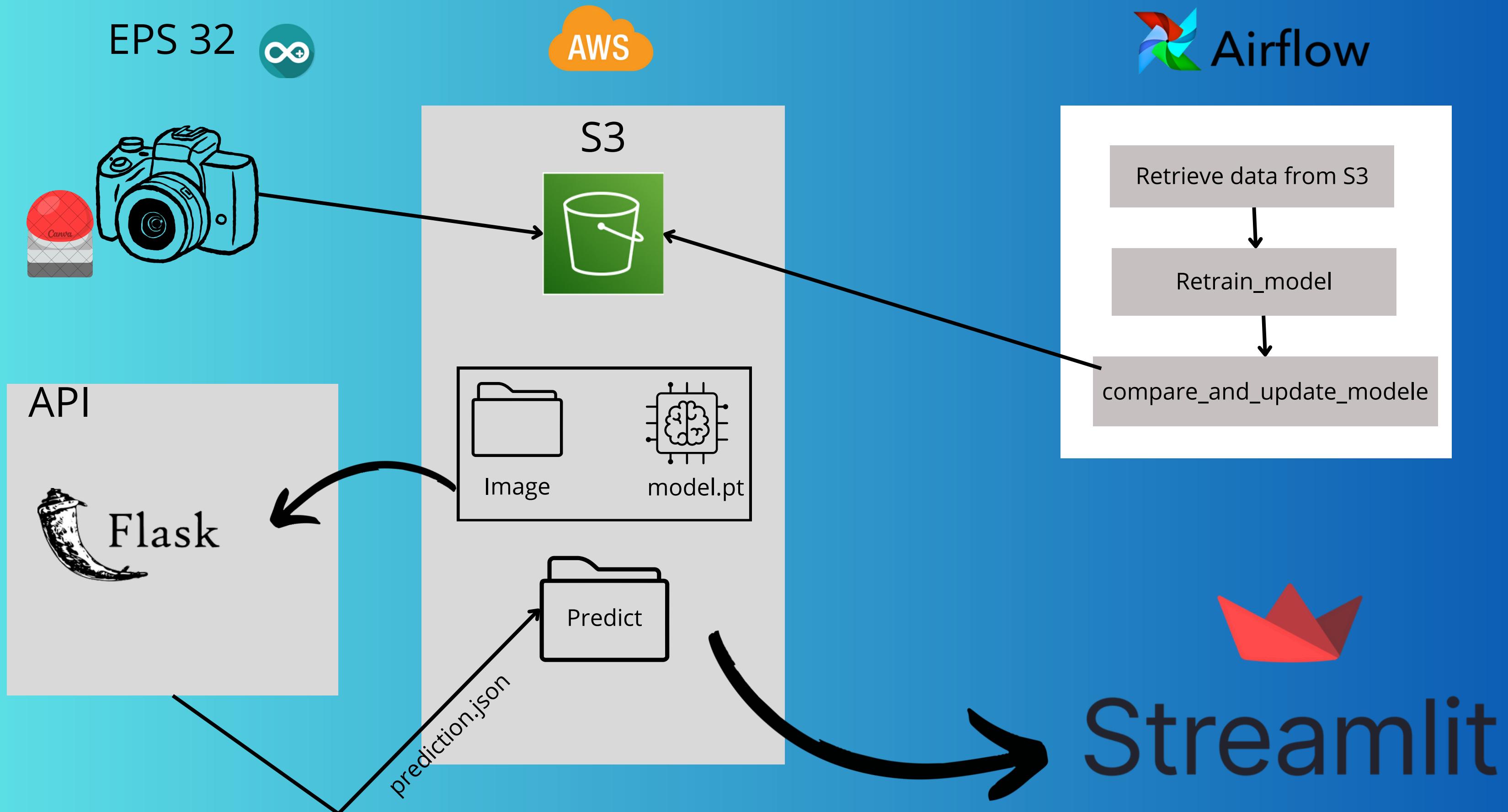


INTRODUCTION

Description Fonctionnelle

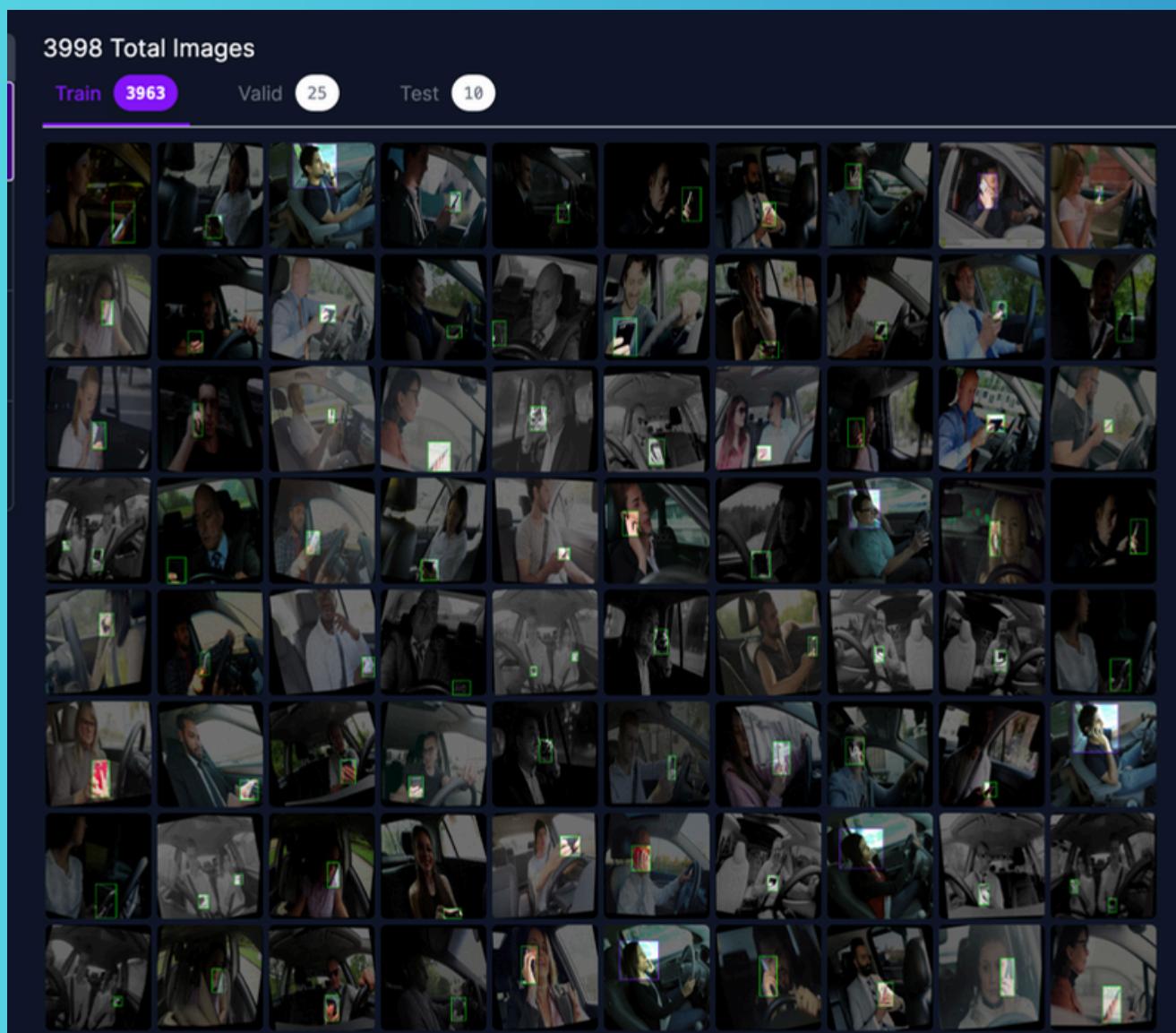


Architecture Technique

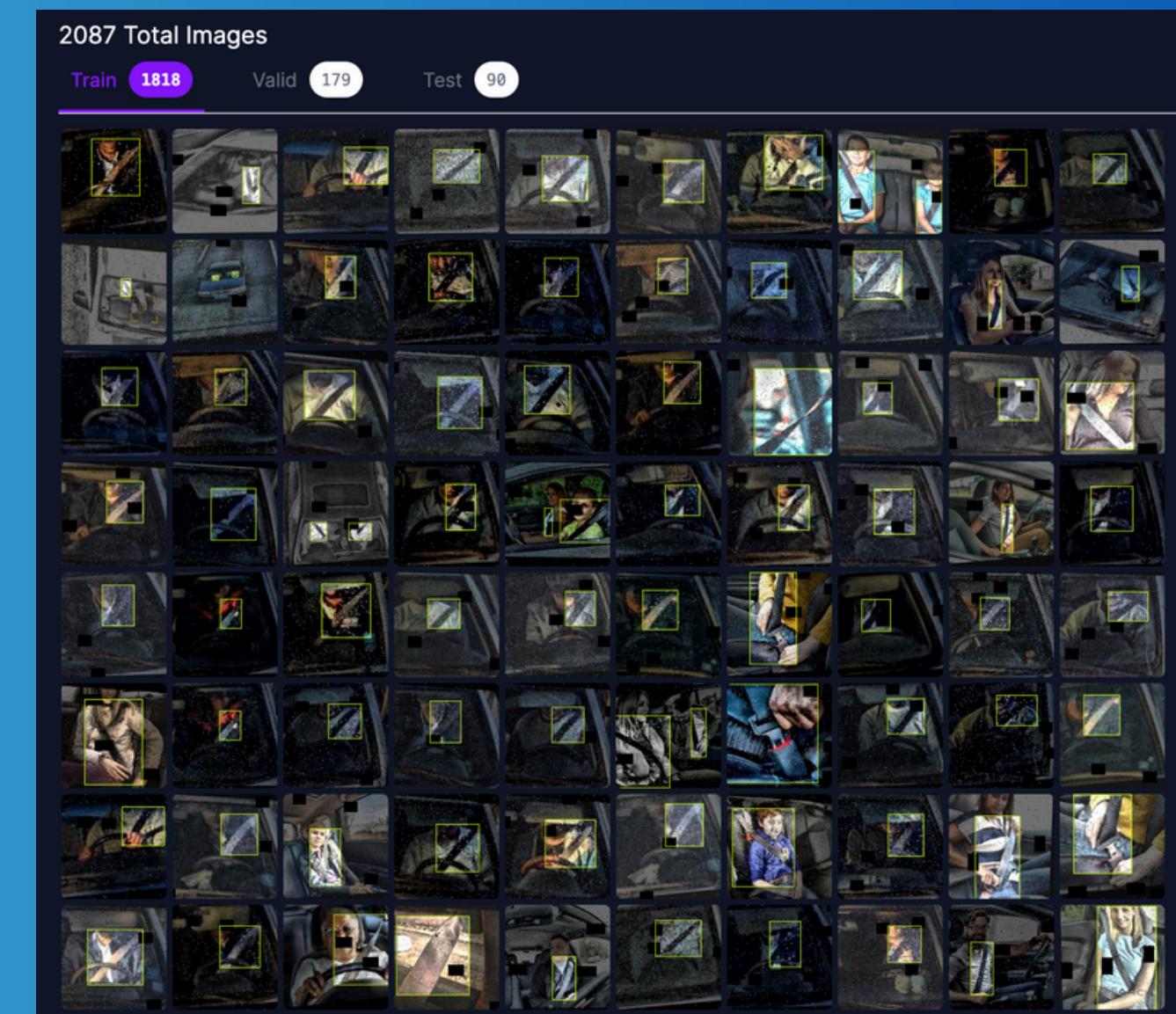


Dataset

Source : <https://universe.roboflow.com>



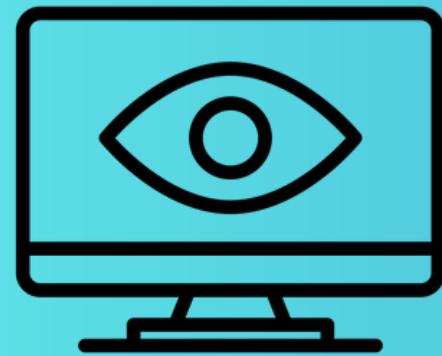
utilisation du téléphone au volant



port de la ceinture de sécurité au volant

Modele

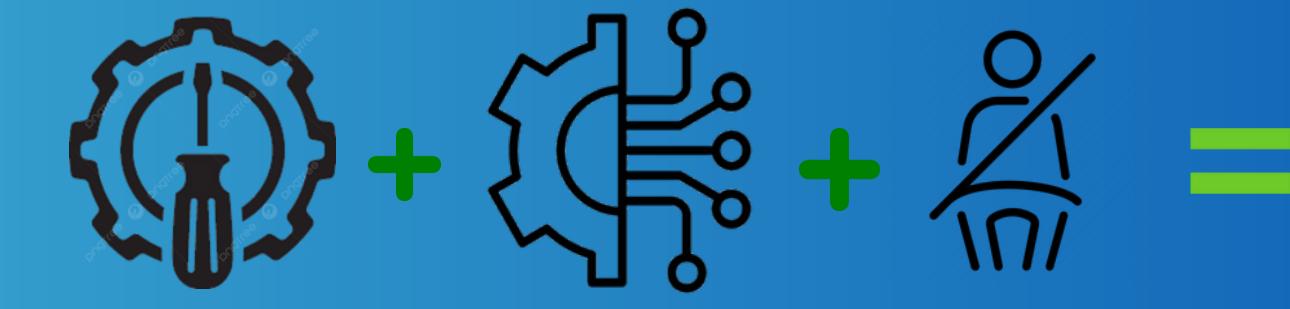
Computer



ultralytics
YOLOv8

Vision

object detection

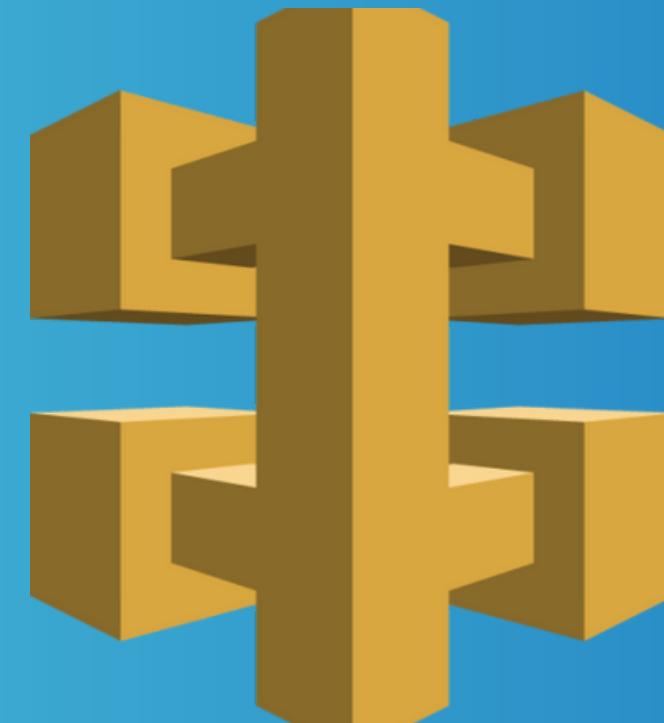


accuracy: 78%

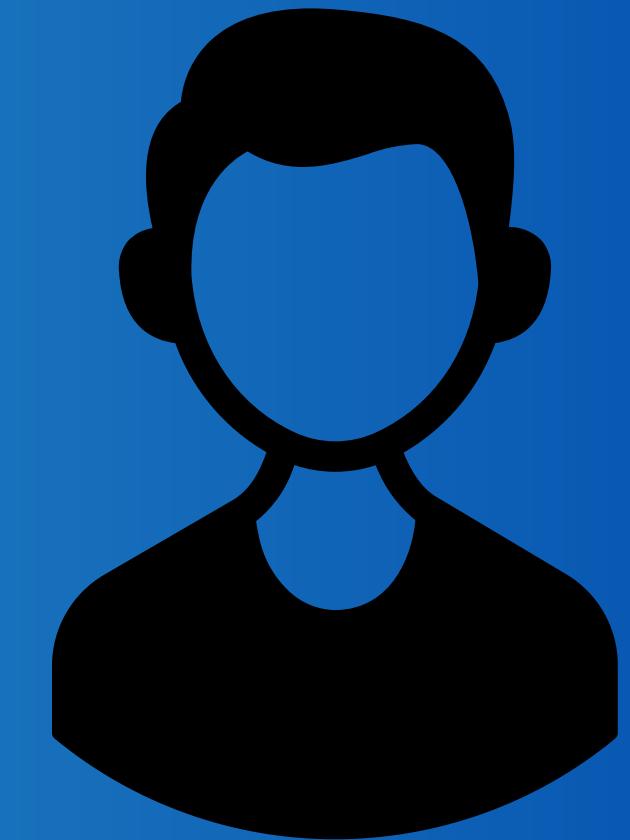
AWS



S3



API Gateway: GET, PUT



User ADMIN

API

- Get latest image
- Load ML
- Make prediction
- Return prediction.json



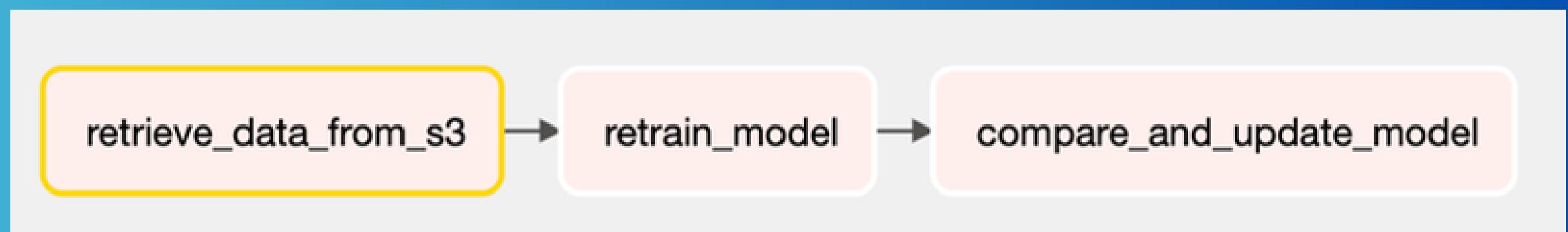
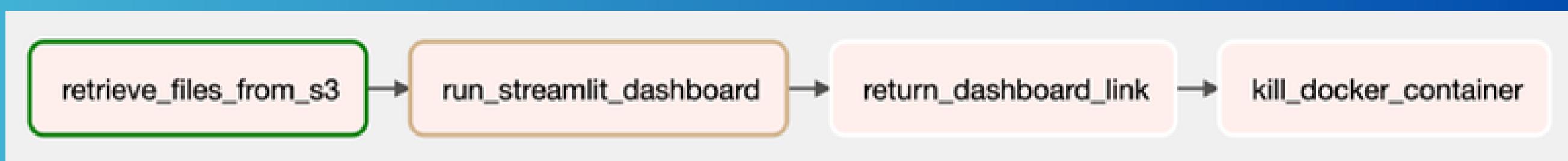
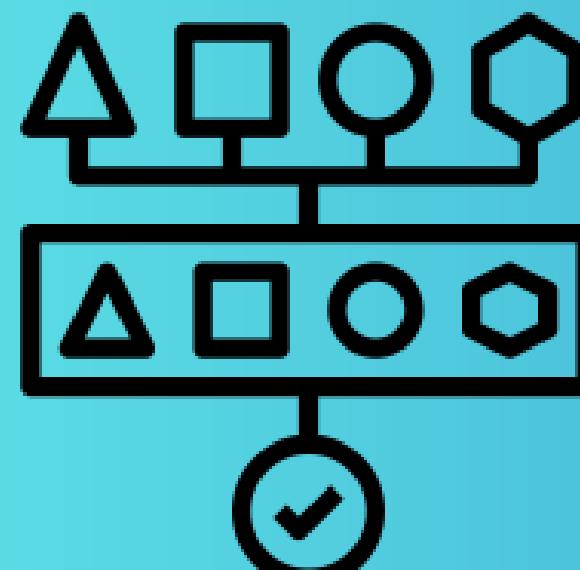
Flask





Airflow

2 pipelines



Arduino



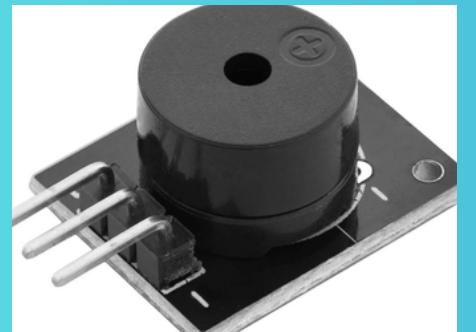
Config Camera



Capture image



Send image



Get prediction / tonne



Dashboard



Streamlit

Deploy ⚙

Navigation
Historique des Prédictions

Filtrer par
Tous
Ceinture
Pas de ceinture

Refresh

Enable Auto-Refresh


Original Image


Predicted Image

Prediction: Seatbelt

This dashboard interface is titled "Seatbelt Detection Dashboard". It features a sidebar on the left with navigation and filtering options. The main area displays two images of a woman driving a car. The "Original Image" shows her smiling and leaning forward. The "Predicted Image" shows the same scene with a large green checkmark overlaid, indicating the seatbelt detection model has correctly identified the seatbelt. A "Prediction: Seatbelt" label at the bottom confirms the result.

Conclusion