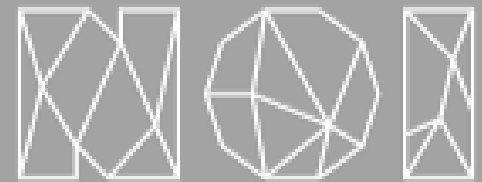


ESG_Pilot



HACKATHON

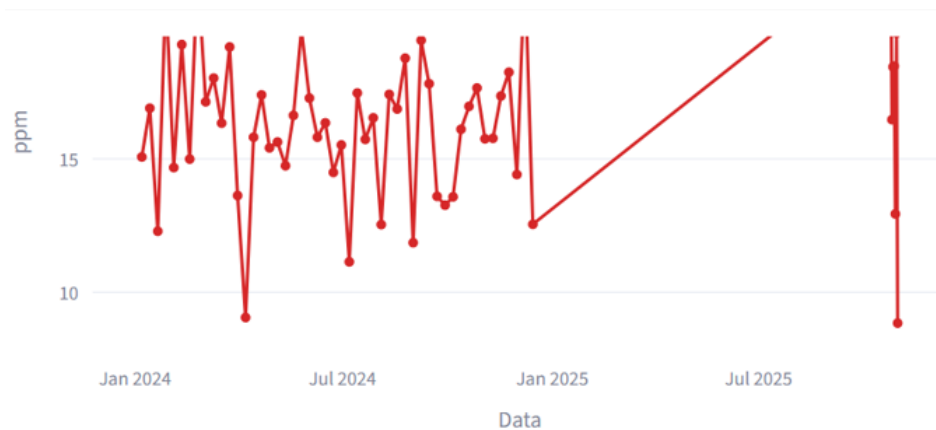
EcoMe

Emanuele Pippa – FrontEnd



Mirko Bandello - BackEnd





Distribuzione per giorno - SITE-B (ppm)



- ESG_Pilot
- Scope: read and display in a human-friendly way the ESG impacts information of companies. From csv files to exportable Charts, AI to analyze and verify the data.
- Make people and companies conscious of the company ESG status.

How did we solve the challenges

Approach:

- Streamlit-based ESG cockpit that reads CSV, UX flows for uploads

Technologies:

- Frontend: Streamlit + Plotly Express for responsive dashboards, CSS for styling
- Backend/API: FastAPI
- Data: Pandas/Numpy pipelines for aggregation, anomaly detection, ranking math; Ollama LLM integration for AI suggestions.

Main Challenges:

- Heterogeneous CSV schemas -> Implemented automatic column detection and filename-based unit inference
- Lack of real ESG dataset -> simulated with chatGPT

FileModificaSelezioneVisualizzaVai

team-19

ESPLORA RISORSE

TEAM-19

.streamlit

esg-app

v2

backend

frontend

__pycache__

data

air_pollution.csv

C02_emissions.csv

ecosystem_impact.csv

energy_consume.csv

female_percentage_co...

identificazione_gestion...

material_usage.csv

Salute_sicurezza.csv

water_consumption.csv

app.py

styles.css

bash.exe.stackdump

requirements.txt

LICENSE

README.md

STRUTTURA

SEQUENZA TEMPORALE

app.py

styles.css

Amministratore: Windows PowerShell (x86)

esg-pilot | time=2025-11-08T12:30:19.449Z level=INFO source=routes.go:1619 msg="entering low vram mode" "total vram"="0 B" threshold="20.0 GiB"

esg-pilot | [GIN] 2025/11/08 - 12:30:20 | 200 | 15.809191ms | 127.0.0.1 | GET | "/api/tags"

esg-pilot | Ollama is ready!

esg-pilot | Pulling llama3.2:1b model...

esg-pilot | [GIN] 2025/11/08 - 12:30:20 | 200 | 1.309519ms | 127.0.0.1 | HEAD | "/"

esg-pilot | [GIN] 2025/11/08 - 12:30:21 | 200 | 954.351816ms | 127.0.0.1 | POST | "/api/pull"

esg-pilot | pulling manifest

esg-pilot | pulling 74701a8c35f6: 100% [REDACTED] 1.3 GB

esg-pilot | pulling 966de95ca8a6: 100% [REDACTED] 1.4 KB

esg-pilot | pulling fcc5a6bec9da: 100% [REDACTED] 7.7 KB

esg-pilot | pulling a70ff7e570d9: 100% [REDACTED] 6.0 KB

esg-pilot | pulling 4f659a1e86d7: 100% [REDACTED] 485 B

esg-pilot | verifying sha256 digest

esg-pilot | writing manifest

esg-pilot | success

esg-pilot | Starting FastAPI backend...

esg-pilot | Starting Streamlit frontend...

esg-pilot | All services started!

esg-pilot | Frontend: http://localhost:8501

esg-pilot | Backend: http://localhost:8000

esg-pilot | Ollama: http://localhost:11434

esg-pilot | Collecting usage statistics. To deactivate, set browser.gatherUsageStats to False.

esg-pilot | You can now view your Streamlit app in your browser.

esg-pilot | URL: http://0.0.0.0:8501

esg-pilot | INFO: Started server process [48]

esg-pilot | INFO: Waiting for application startup.

esg-pilot | INFO: Application startup complete.

esg-pilot | INFO: Uvicorn running on http://0.0.0.0:8000 (Press CTRL+C to quit)

Gracefully Stopping... press Ctrl+C again to force

Container esg-pilot Stopping

Container esg-pilot Stopped

PS D:_EMANUELE\Hackathon\team-19\esg-app> docker compose up

View in Docker Desktop View Config Enable Watch

else:

metrics = {'error': 'no data'}

main*

Launchpad

0 0

Live Share

You, 3 ore fa

Emanuele Pippa (2 ore fa)

Riga 454, colonna 1

Spazi: 4

UTF-8

CRLF

{ } MagicPython

3.12.3

13:32

08/11/2025