AI4 Copernicus

Energy

Meet the AI4Copernicus Projects
resulted from the Open Calls (by domain)

SLIDE

SateLlite Image prediction using DEep learning

Company(ies): Solaïs, Transvalor SA.

Country(ies): France

Industry: Renewable energy, data science

Vision: To improve satellite image forecast for off-grid sites and islands.

Mission: To provide access to satellite image forecast to end-user

Values: Innovation, technology, excellency

Achievements:

- AI4Copernicus Open Call Winner #

Problem

Current solutions use linear models called Cloud Motion Vector to forecast cloud movements (strong assumption on light continuity from image to image).

AI Service(s)

Forecast of the next 2 hours satellite images in real time

Applied on Meteosat images but can be extended to other geostationary satellites

Timeseries on a specific site

Target Market(s)

Solar energy market

Business Model

B2B with spin off creation (CalibSun) in September

Solution

A ConvLSTM solution with an appropriate loss function to produce high quality forecast images and higher ramp detection.

Innovative Aspects

- Apply ConvLSTM to geostationary satellite images
- Add many constraints including physical to loss function
- Improve ramp detection

Competitors

Reuniwatt, SteadySun, CSP Services

Targets

- Grid manager, PV plant operator, Aggregator (traders).

Contact us!
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AIMPSI

Ectios

Company: Ectios

Country: Spain

Industry: Energy

Vision: To be a catalyst for the sustainable energy transition through innovative AI/ML solutions.

Mission: To provide efficiency, sustainability, energy safety, and economic benefits.

Values: Innovation, Excellence, Sustainability, Collaboration

Achievements:

- AI4Copernicus Open Call 5 Winner

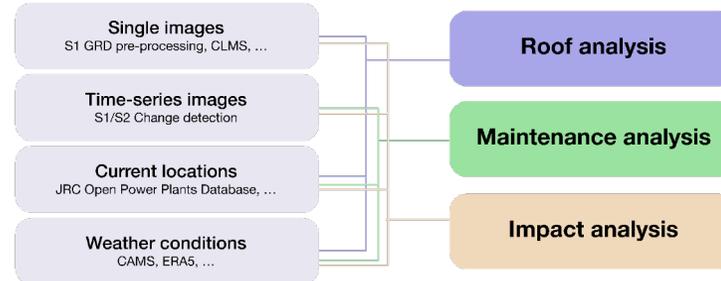- Previous project participations (incl. EUROSTARS, Red.es, EDI,…)

Problem

Maximize adoption and benefits of DERs, while facing issues such as optimal locations, maintenance, and planning of solar installations

Solution

Leverages EO data and AI technologies to provide comprehensive analyses, forecasting, and optimization tools

AI Services

Single images S1 GRD pre-processing, CLMS, …	Roof analysis
Time-series images S1/S2 Change detection	Maintenance analysis
Current locations JRC Open Power Plants Database, …	Impact analysis
Weather conditions CAMS, ERA5, …	

Innovative Aspects

- Proactive Location Assessment and maintenance

- Enhanced Power Network Planning

- Empowering Stakeholders and Improved Decision-Making

Target Markets

Renewable energy sector, with initial focus on *Spain*, and potential expansion to *European* and *international* markets

Competitors

Project Sunroof, SolarGaps, Google, TESLA, e·on, nearmap, حصدبيل (A Palmetto Company), solaredge

Business Model

- B2C
- B2B
- B2B2B
- Governments & Public Sector
- International expansion

Targets for the next 3-5 years

1. Market Penetration and Revenue Growth
2. Product Innovation and Differentiation
3. Strategic Partnerships and Expansion

Contact us!

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AI4EW-Artificial Intelligence for Early Warning
GECOsistema srl

Country: Italy

Industry: Consulting Engineering

Vision: Sustainable and Climate Resilience Cities

Mission: Climate Risk Intelligence at your fingertips

Values: research and innovation for resilient cities

Achievements:

- AI4Copernicus Open Call Winner
- Copernicus Master 2022 Italian Prize (ASI)

Problem
Floods cause enormous amounts of damage in Europe. People are not warned on time.

Solution
An AI-based platform that forecasts river stages and flow rate for supporting early warnings in near-real time.

AI Service(s)
Our AI service forecasts the stage of rivers 12 hours in advance

Innovative Aspects
- Various new Machine Learning approaches (from 2022 and 2023 research)

Target Market(s)
Civil Protection, First Responders and Asset Managers

Competitors
MIKE-URBAN

Business Model
The AI-based model will be embedded in saferplaces.co: a SaaS/APIs solution with a B2B2C business model

Targets
- Selling 1500 licenses in 6 years

Contact us!
platform@saferplaces.co   Website gecosistema.com – saferplaces.co