ODFuse4Ship

AMPHITRITE
OCEAN DATA INTELLIGENCE

Country: France

Industry:

Shipping

Vision: Predict accurate & high-resolution ocean currents from satellite data using AI methods

Mission: Optimise shipping routes to save fuel and emissions

Values: Transforming the most recent scientific research in AI and oceanography into environmentally conscious maritime applications AI4Copernicus Open Call Winner (3
round)

Problem

Due to lack of accurate data, ships cannot optimize their trajectories by following fine-scale currents

Solution

We produce high-resolution and reliable ocean current maps enabling a Short-Term Optimal Routing. Vessels can reduce fuel consumption and CO2 emissions.

AI Service

Fusing multiple satellite data sources (e.g. sea surface height, temperature, chlorophyll) using the latest methods in computer vision to predict ocean currents

Innovative Aspects

By fusing multiple satellite data sources and by using state-of-the-art methods in computer vision, we obtain the best available operational predictions of ocean currents

Target Market(s)

Now: Shipping industry
Next: Ocean plastics clean-up

Competitors

MetOcean Providers : Sofar Ocean, Tidetech

Business Model

Our main clients and prospects are currently ship owners

Targets

- **Shipping Decarbonization** Early Adopters

- **Ocean Plastics Clean-up** EIC Transition

Contact us!

Hannah Bull and Evangelos Moschos   www.amphitrite.fr

URBALYTICS

Companies:

LATITUDO 40° LAND

Country: Italy
Industry:
Landscape consultancy
Earth Observation

Vision: Bridge AI with Remote Sensing, supporting city planners and decision-makers in the context of climate resilience and related challenges in urban areas

Mission: Empowering cities to embrace Environmental Sustainability and take ESG decisions to design Liveable Places

Values: Multidisciplinarity, Sustainability, Explainability, Replicability

Achievements:
- AI4Copernicus 4th Open Call Winner
- Selected poster at ECCA2023

Problem

Urban Heat Island Assessment and Climate Change Adaptation through Nature-Based Solutions (NBS)

Solution

Automated workflow that combines Land Cover and Land Surface Temperature models and derives Surface UHI from Copernicus Sentinel-2 images, assessing Ecosystem Services provided by Urban Green Infrastructures and proposing a set of Nature-Based Solutions.

AI Service(s)

1. Heatwave Potential Risk (HPR)
2. Microclimatic Performance Index (MPI) of Urban Vegetation
3. Park Cool Islands (PCI) assessment
4. UHI Adaptation scenarios through NBS implementation

Innovative Aspects

- Up-to-date datasets
- Urban Heat Island Assessment at 10 m spatial resolution
- Ranking methods for Urban Vegetation classes
- Fully automated and replicable

Target Market(s)

Public administrations, Private companies, Urban planners, Corporations. Pilot cases: Naples and Milan.

Competitors

Start-ups, consultancy companies

Business Model

B2C, B2B, B2G, B2B2G

Targets

- Development of a competitive tool for Climate Vulnerability Assessment

Contact us!

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LIFT Sentinel

FLYCOM TECHNOLOGIES

Company(ies): Flycom Technologies d.o.o

Country(ies): Slovenia

Industry: Remote sensing and location intelligence

Vision: To be driving force for a sustainable remote sensing and location intelligence

Mission: To provide remote sensing and location intelligence services which bring high value to our clients and make our team proud.

Values: Innovation, responsibility, sustainability

Achievements:

- AI4Copernicus Open Call Winner
- Copernicus incubation winners
- Copernicus Acceleration startup of the month

Problem

Ratio of **urban**/**rural** land use on S2 images. Detection of **forests,** and **water** for different purposes.

Solution

Extend our HazMap module with trained machine learning model from AI4Copernicus service for detection of the four classes.

AI Service(s)

- Ratio of urban and rural areas for selected tiles
- Detecting forest areas to aid in identifying illegal logging activities and monitoring forest conservation efforts.
- Identifying water areas to detect dry regions or potential flood zones, assisting in disaster management and water resource planning.

Innovative Aspects

- Upgrade existing HazMap module working on AI solutions, that is integrated in LIFT software

Target Market(s)

Risk management for insurance companies, agriculture domain for forests and automatization of some processes in our company.

Competitors

We have not found out off the shelve solution

Business Model

All our business is B2B and we intend to upsell LIFT Sentinel module to our current and new clients.

Targets

- Insurance, forestry and smart cities

Contact us!   info@flycom.si   https://www.flycom.si/en/homepage/

SandMap

Company: Sense P.C

Country: Greece

Industry: IT, Education

Vision: To provide technological solutions and products for the benefit of society, through innovative and disruptive research

Mission: Taking education out of the classroom and rising spatial intelligence. One SandMap system in every school.

Values: Excellence, innovation.

Achievements:

• AI4Copernicus Open Call Winner #

• Copernicus Masters

Problem

• Lack of educational tools which promote the spatial intelligence of students

• Utilization of AI and EO as users (not only as developers)

Solution

Developement of a tagible and interactive GIS system, focused on education, which reinforces environmental consciousness to the students, through several senarios and exersices.

AI Service(s)

• Detection of changes that are provoked after disasters (e.g fires, floods)

• Automatic classification of tree-crops using DL-based image segmentation

• Vegetation health prediction, using spatio-temporal NDVI indices through an LSTM neural network

Innovative Aspects

• A complete 3D GIS system focused on education

• First tangible GIS system that encompasses Sentinel data

• Large database of exercises for enviromental issues understanding

Target Market(s)

Educational Institutions, Museums, Civil Protrection and Public entities in a national and subsequently European scale

Competitors

Sandscape   Topobox

Fantasy Sand   iSandbox

Business Model

B2B: Schools in all levels, museums, public safety, hardware + service,

B2C: Teachers, social workers, psychology practitioners.

Targets

• Integration of SandMap as an educational tool in public & private schools (at least 100).

• Integration in museums (at least 3).

Contact us!   Mail: ppartsi@gmail.com   Website: senseit.gr