

UP⁴²

Solving Challenges in Geospatial Information by Democratizing Data Access and Usability

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UP42

Geospatial World Forum, 21st. October 2021



GWFF 2021
GEOSPATIAL WORLD FORUM

2019 Kincadee Wildfire (California, USA)



Source: New York Times (April 2021)



Source: New York Times (July 2021)

2021 Greece and México Fires



"Between Jan. 1 and March 11 of this year, Mexico experienced its worst forest fires on record in the past decade"
Pulse News MX

Democratizing EO is an impact multiplier



Space4Good

1,898 followers

1mo • 🌐




Space4Good **#FireAlerts** at work! Thanks to our swift **#satellite**-based information product, near-real-time **#alerts** led to the **#forest #fire** being extinguished the same day in the **#Borneo** region of **#Indonesia** - A shining example of the power of **#geospatial #remotesensing** products for the prevention of **#deforestation!**

Interested in fire alert systems or want to learn more? Visit our website or email us: <https://bit.ly/308UDFc>

#tech4good #space #sustainability



Like



We are too dependent on each other to ignore the global impacts of our social, economic and political interactions.

Space is the only vantage point that gives us constant global oversight, and AI is the only way we can understand at scale.

What is UP42?

A developer platform and marketplace to derive insights from geospatial data at scale



The team:

+65 people from +25 countries based in Berlin

Founded & 100% owned by:



Incubated and mentored by:



What industry problems are holding us back?

1

The data ecosystem is fragmented

- Suppliers focus on large customers
- Commercial and contractual complexity is a barrier for many companies
- Technical mechanisms for accessing the data vary greatly across providers

2

It's hard to build/distribute algorithms

- AI is the only way to take full advantage of increasing amount of EO data
- Expensive to train and no easy way to commercially distribute algorithms
- Leads to solution lock-in or heavy lifting on re-implementing proven algorithms

3

It's hard to scale efficiently

- Using UI-driven tools does not scale
- Developer first and API centric approach is not yet fully mature
- Building & maintaining your own scalable and efficient cloud environment is expensive

UP42 is a paradigm shift in the industry

Open Marketplace of Geospatial Data and Algorithms

- 150+ data sources and algorithms
- Simple, pay as you use pricing
- Revenue share or reseller model

Simple UI for Discovery and Rapid Prototyping

- Find and access data
- Build processing pipelines
- Run machine learning at scale
- No code required



Workflow Engine & Scalable Infrastructure

- Data and algorithm compatibility
- Scalable cloud infrastructure
- Bring your own data or algorithms

Powerful Platform APIs and SDKs

- API-driven platform
- Allows easy integration and scaling
- Open source Python SDK
- Open source integration examples

Case Study: Landslide in Rishi Ganga Valley

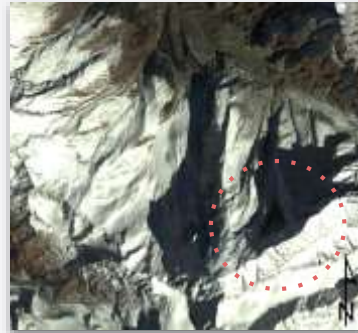
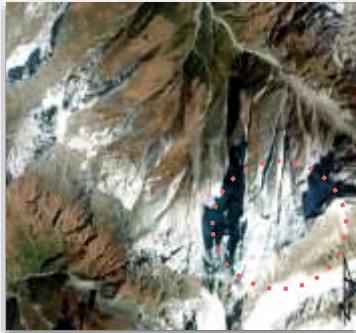
Who/What was impacted?

- Landslide from collapsing glacier triggered a flood on 7th Feb 2021
- Over 100 lives lost
- Destruction of hydroelectric power plants

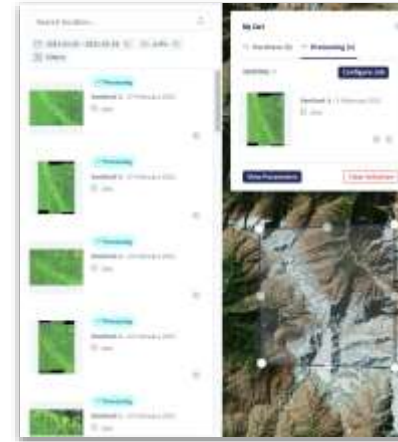
Could the impact have been mitigated?

- What if EO could have given advanced warning?
- We used Sentinel-1 and Catalyst.Earth InSAR Ground Deformation to find out if there were any warning signs

Spot 6/7 imagery before and after the landslide



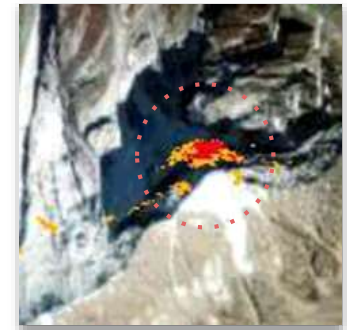
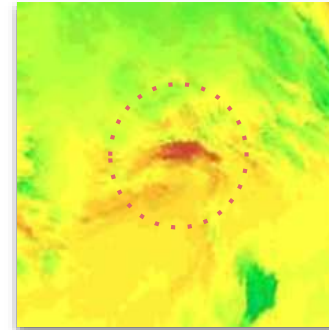
1. Find and select Sentinel-1 images for 22nd Jan and 3rd Feb



2. Running Catalyst.Earth InSAR Ground Deformation



3. Significant ground displacement is visible in weeks before the landslide



A fast growing ecosystem for AI-driven Earth Observation

50+









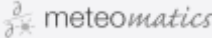







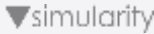
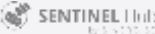

Marketplace suppliers

150+

Data sources and algorithms

32k+

Sign-ups

AIRBUS	 esa	sobloo	 HEAD	 SIIS	 HEXAGON GEOSPATIAL
 exactEarth®	 INTERMAP	 getmapping®	 TCARTA	 meteomatics	 LATITUDO 40
CATALYST	 Orbital Insight	 Picterra	 Spacemetric	 HYPERVERGE	vasunḍharaa
 SPACE SHIFT	aventi  r	 similarity	 SENTINEL Hub BUSINESS	OZSolutions	 pinkmatter solutions

“Cooperation is the key”

“Not only focusing in production of information, also emphasize in the usage of information”

“Everyone is there, Everyone participate, Everyone takes value”

“Community of solidarity to reduce the digital divide”





geof

GEOCHICAS & Women in Geospatial+

TAKE GEOSPATIAL WORLD FORUM



October 21th. 18:30
Brasserie Roezemoes
Hermitage 7, Zaandam
First drink on us!

A women* and non-binary event.
*Whoever perceives herself as a woman.

Sponsored by:



Organized by:



GEOCHICAS

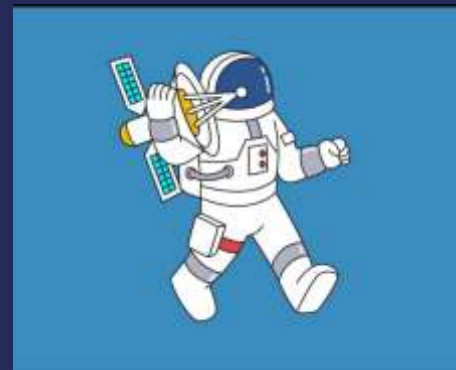


Join our ecosystem.

Miriam González

Partnerships

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