# AI for Good

## Geo AI Challenge

## Landslide Detection Challenge: Integrating SAR and Optical Imagery for Innovative AI

In partnership with

WORLD METEOROLOGICAL ORGANIZATION

esa
THE EUROPEAN SPACE AGENCY

UNIVERSITÀ DEGLI STUDI DI PADOVA

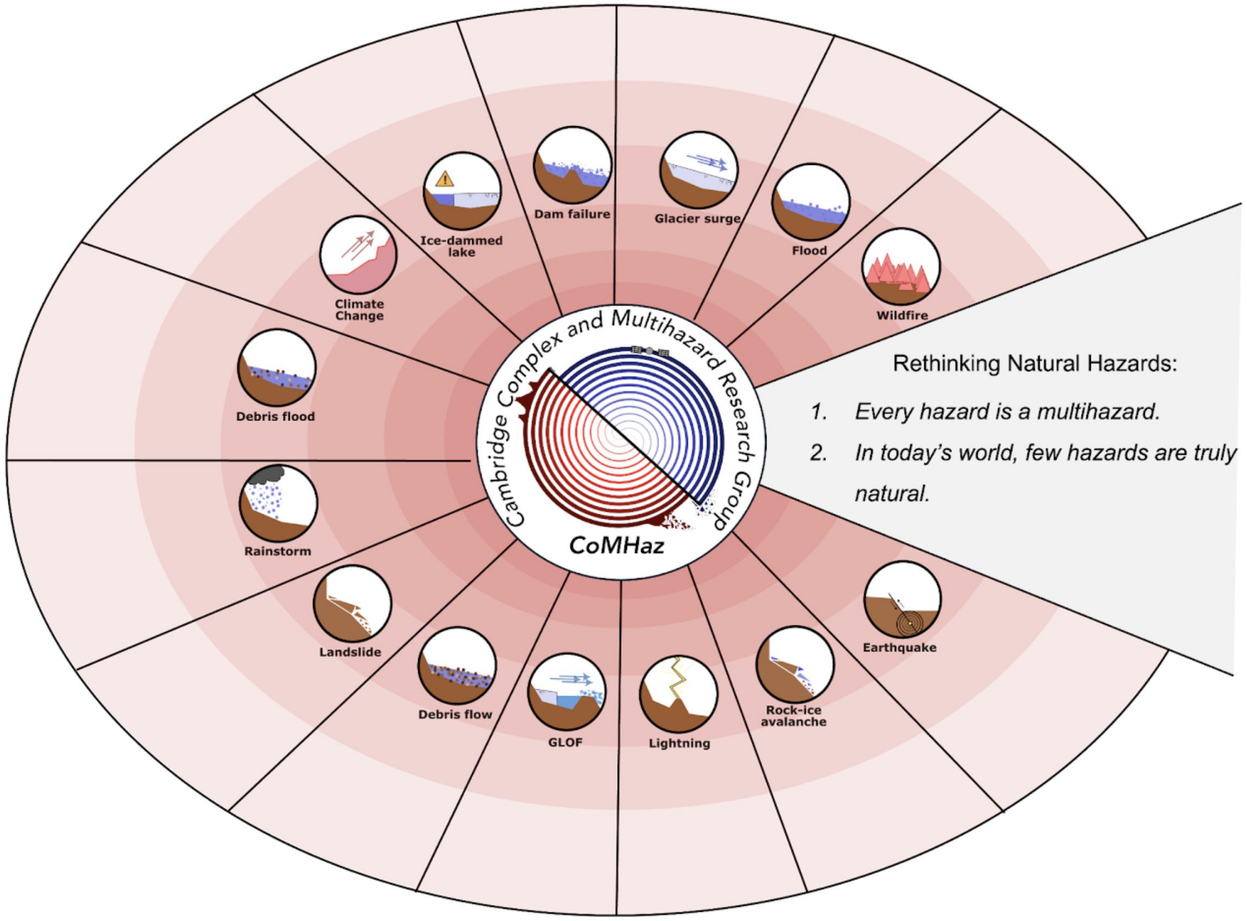
UNIVERSITY OF CAMBRIDGE

40+ UN PARTNERS

ITU

Researcher at

UNIVERSITY OF CAMBRIDGE




AI: AI for Natural Disaster Management

ITU Focus Group

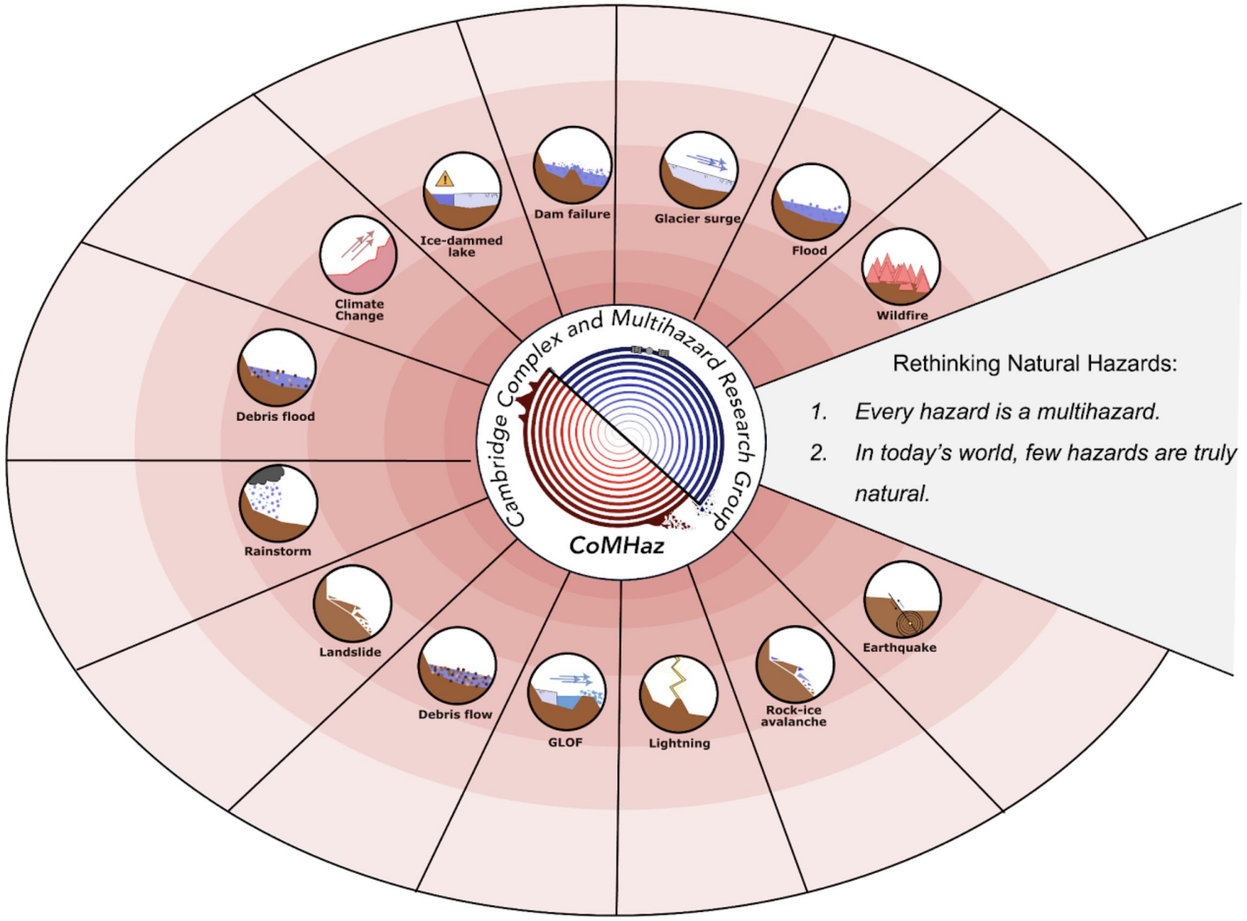
2020 - 2024

ITU

UN environment programme

- UN Partnership
- Systematically evaluating AI use to identify challenges & opportunities
- Community of experts & stakeholders
- Developing best practices
- Supporting capacity sharing

Researcher at UNIVERSITY OF CAMBRIDGE




AI: AI for Natural Disaster Management

ITU Focus Group

2020 - 2024

ITU

UN environment programme

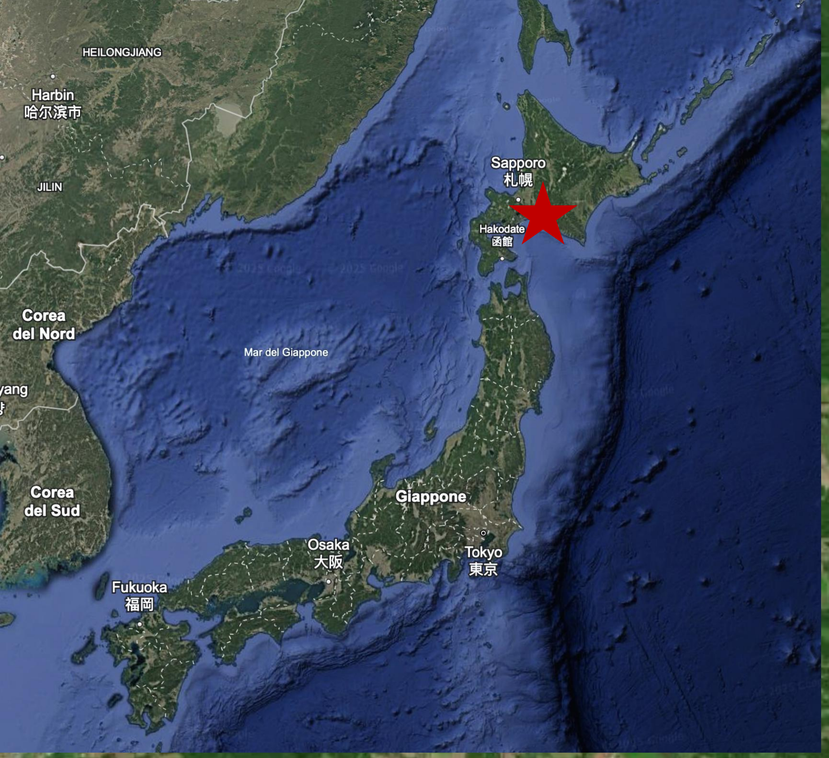
Global Initiative

- UN Partnership
- Systematically evaluating AI use to identify challenges & opportunities
- Community of experts & stakeholders
- Developing best practices
- Supporting capacity sharing

TIMES
NOW

Source: ICDO

Source: USGS

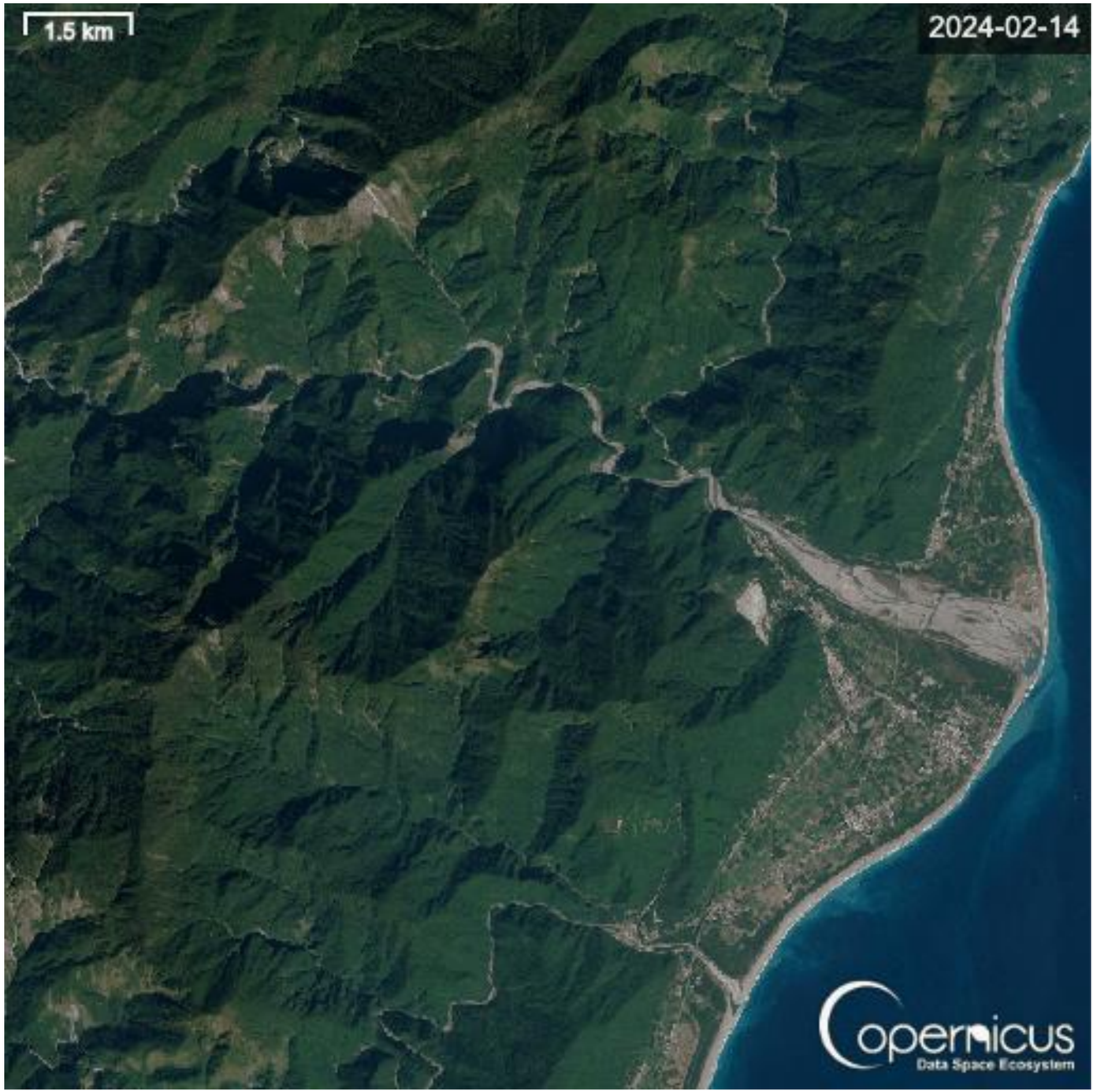

HEILONGJIANG
Harbin
哈尔滨市
JILIN
Sapporo
札幌
Hakodate
函館
Corea
del Nord
Mar del Giappone
Corea
del Sud
Giappone
Osaka
大阪
Tokyo
東京
Fukuoka
福岡

Sentinel-2

Sentinel-2

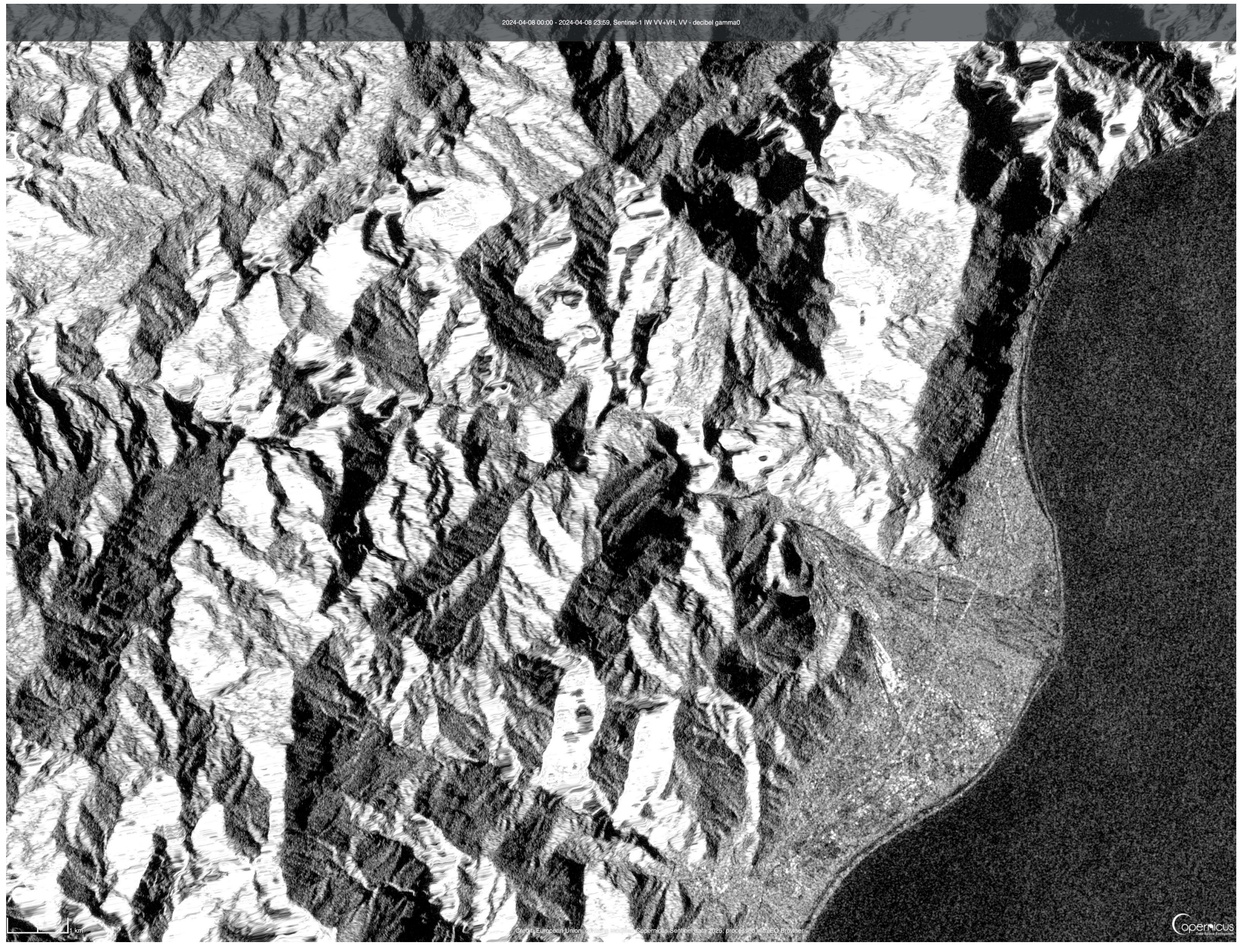
Sentinel-2

# Mw 7.4 Hualien earthquake - 2nd April 2024 Taiwan



Sentinel-2

Sentinel-1



# Image Classification Framework

Generally, more accurate.

Sentinel-2

Sentinel-1

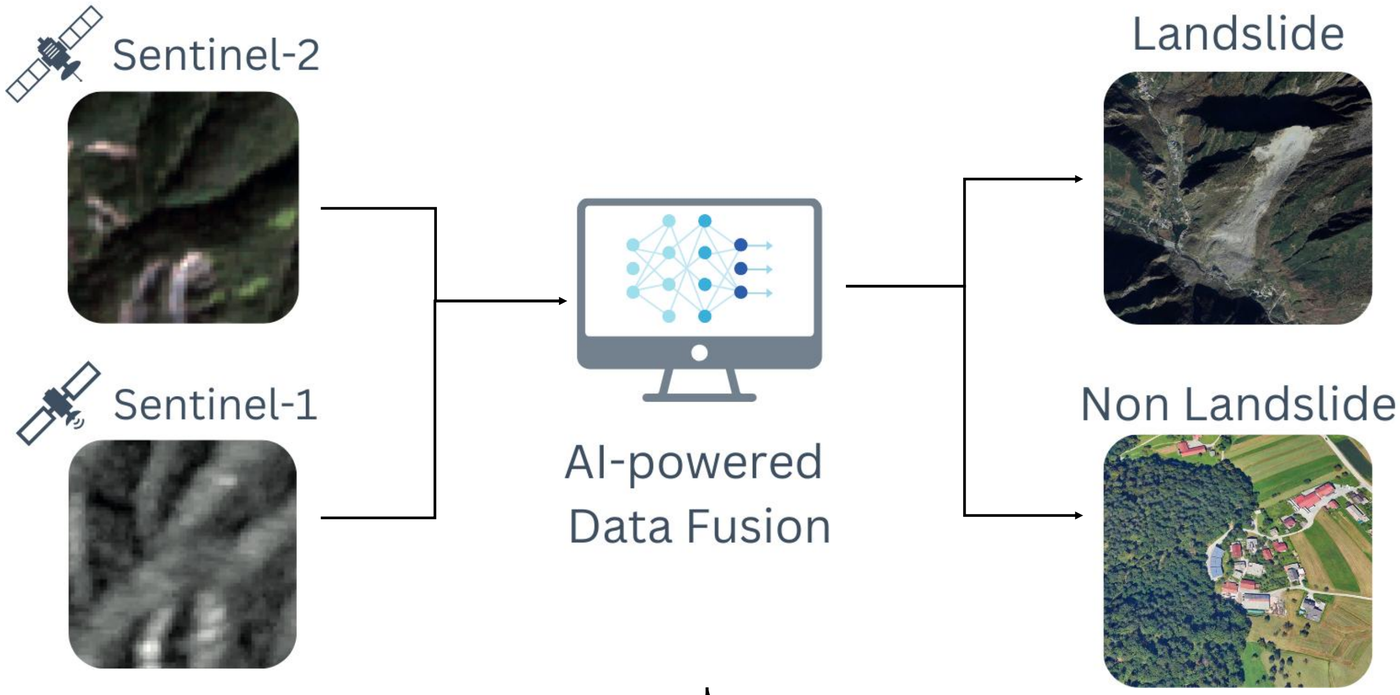
Usable in cloudy conditions and at night.

AI-powered
Data Fusion

Landslide

Non Landslide

# Trustworthiness and sustainability




Why does the model say there's a landslide here?

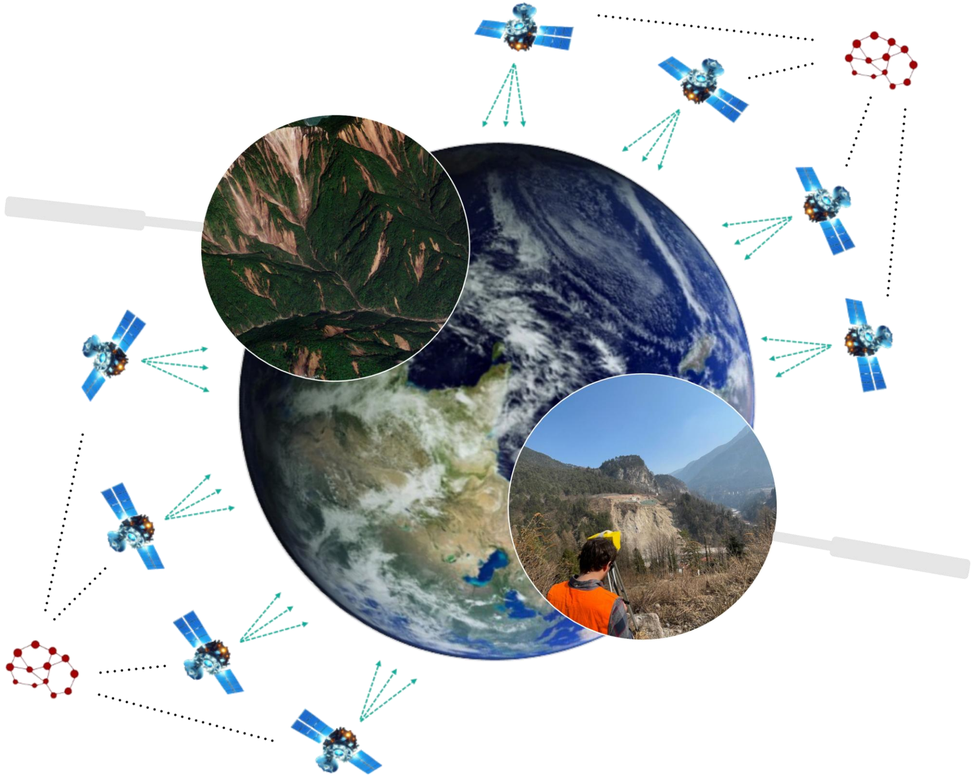
Any bias?

Is the solution reusable?

Is it sustainable?

## Who is this challenge for?

- Any experience level.
- We provide a **starter notebook** and resources to guide you through exploring, processing, and analysing the data.



## Challenge Objectives:

- Develop methods for **automated landslide detection** using **open-source**, **multimodal imagery** (both optical and radar) to enable effective, large-scale monitoring and timely identification of landslide events.
- Adhere to **trustworthy AI guidelines** to create solutions that extend beyond performance metrics, ensuring models are **transparent, ethical,** and **impactful**, with tangible benefits for society and disaster resilience efforts.

# Classification for Landslide Detection

Can you create a classification model to identify landslides?

**1000 CHF**

ZINDI · esa · ITU · AI · WMO · UNIVERSITY OF CAMBRIDGE · Università degli Studi di Padova

Over 650 teams joined already!!!

SCAN ME