



# SOPHYAI for security & safety control in photovoltaic solar farms.

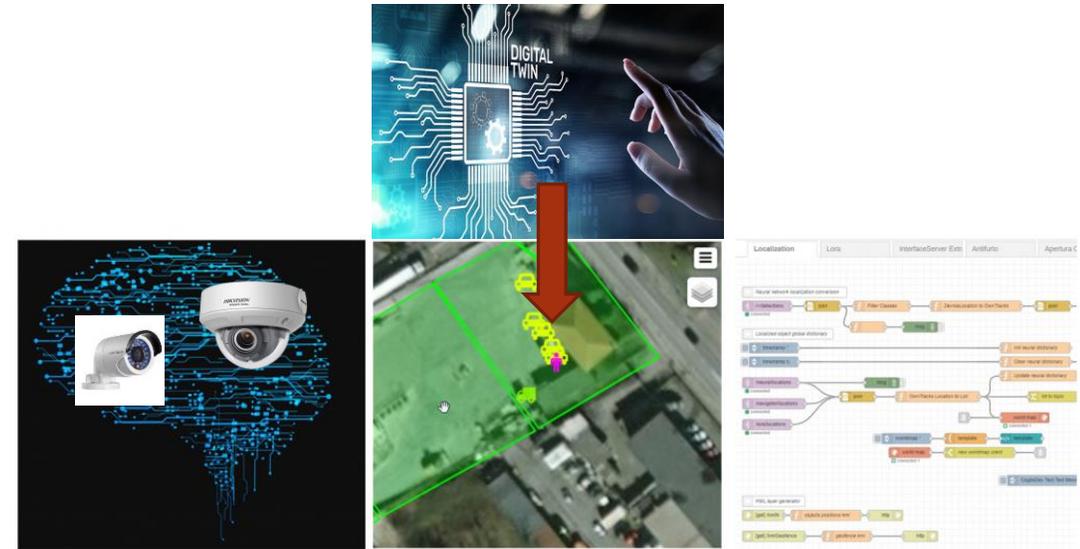
Powered by our patented platform

SophyAI



# A smart "eye" observes the solar farm

- ▶ Our patented SophyAI artificial intelligence platform is able to behave as a careful supervisor on what is happening in a solar farm. The system is based on 3 integrated modules that allow, through normal cameras, even existing cameras, to interpret the scenario in an intelligent way
- ▶ SophyAI allows an observation of the solar farm with the peculiarity of being able to interpret the scene continuously h24. This is done through a "classification" of the observed "objects," their geolocation and, based on precise workflow instructions, the adoption of predetermined, and easily modified, rules that can generate communications, alarms or actuations.
- ▶ SophyAI can integrate with existing IoT and sensor technology, going on to augment its cognitive capabilities and with the ability to perform activations



Machine Learning

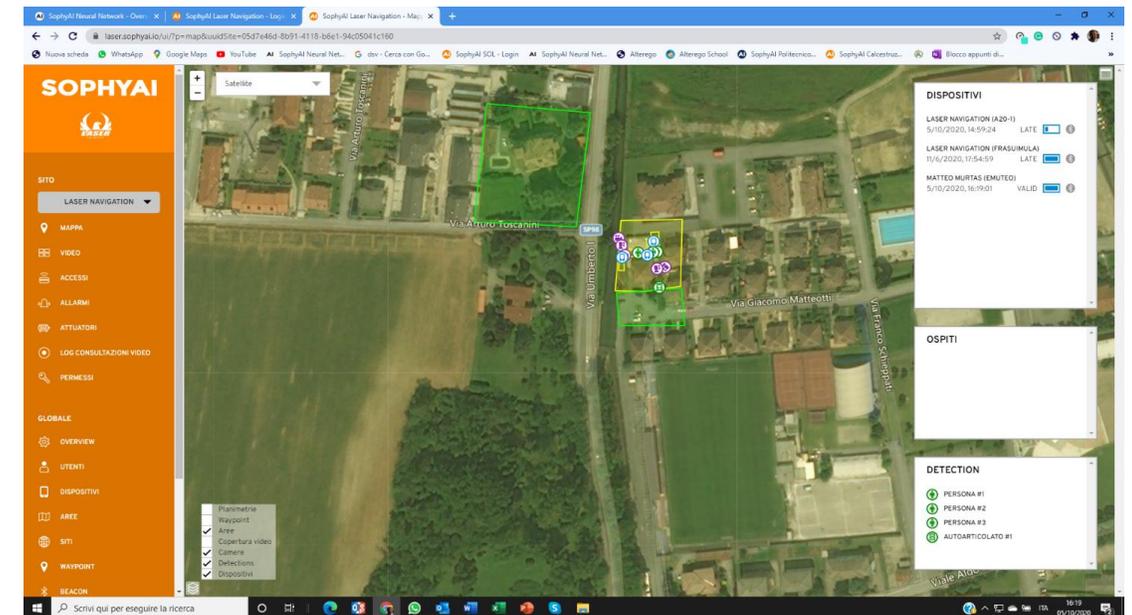
Localization

Workflow



# Geolocalization of the observed and Digital Twin representation on a map

- SophyAI georeferences what it observes through cameras and represents, through specific icons, the observed "objects" on a map
- An important feature is the ability to define on the map, specific areas (geofences) in which particular rules will be applied that will be managed by the workflow module.
- There is full compliance with GDPR regulations. The precise fact that artificial intelligence does not need to record images but only implements neural interpretation and releases only metadata to the workflow component, inhibits the possibility of releasing personal information about those being observed. Of course, those who are in charge of and authorized for visual supervision can access the images in the manner and rules already used. Translated with [www.DeepL.com/Translator](http://www.DeepL.com/Translator) (free version)



# What SophyAI can do with ordinary cameras and the simple click of a mouse

- It all depends on the rules that are set in the workflow module and the neural networks employed.
- SophyAI can identify whether an intruder is a human or an animal and act accordingly.
- Geolocate and track people within the area.
- Using the Sophy Assistance application, know whether or not people are authorized to enter the solar farm.
- Check Man Down situations of the workers.
- Having defined interdicted areas within the field, know if people accessing are authorized or not.
- Recognize vehicles and assets and check if they are being removed.



# What SophyAI can do with thermal cameras

- ▶ Through thermal cameras, the functions seen in the previous slide, can take place even in complete darkness.
- ▶ During the day, by thermal cameras, SophyAI can not only locate a fault in a panel, but geolocalize it, represent it on a synoptic map, and dispatch the fault report to those in charge
- ▶ It can alert immediately if there is a fire outbreak or abnormal overheating in an electrical substation

