Flare Likelihood And Region Eruption foreCASTing

FLARECAST: An Overview

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Start date: 1 January 2015
Sponsor: H2020 (PROTEC-1-2014)
Period of performance: 3 years
Grant amount: 2.4 MEUR

FLARECAST

http://flarecast.eu

FLARECAST Objective & Data Source

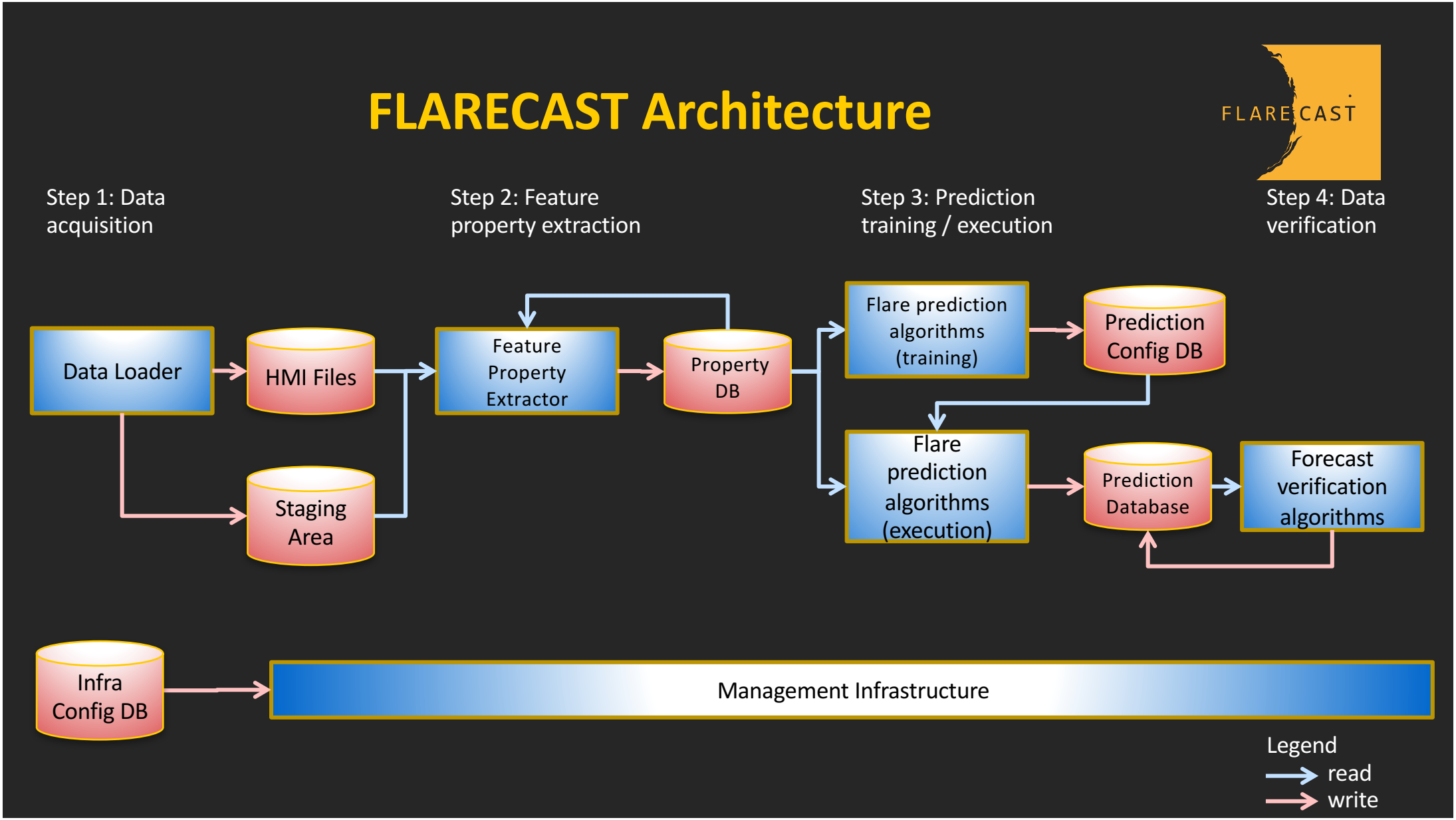
Credit: Stanford University / JSOC

FLARECAST is a European research project aiming to develop an automated solar-flare forecasting system with unmatched accuracy compared to existing facilities.

Primary source of data will be the Helioseismic and Magnetic Imager (HMI) onboard the Solar Dynamics Observatory (SDO) mission, providing:

- Near real-time full-disk LOS magnetograms (45 s cadence)
- NRT SHARP vector magnetogram cutouts (720 s cadence)

FLARECAST Architecture



FLARECAST Approach

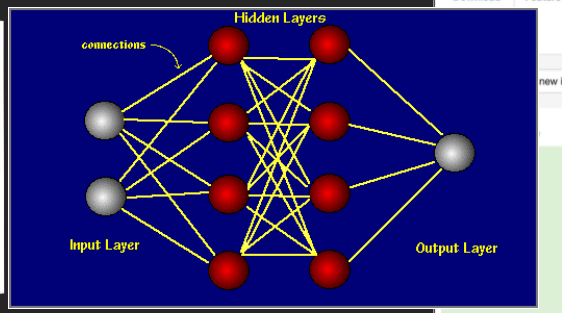
"*Diverse expertise and ways of thinking … this is what FLARECAST is all about*"
(FLARECAST 1st year press release)

@FLARECAST_EU

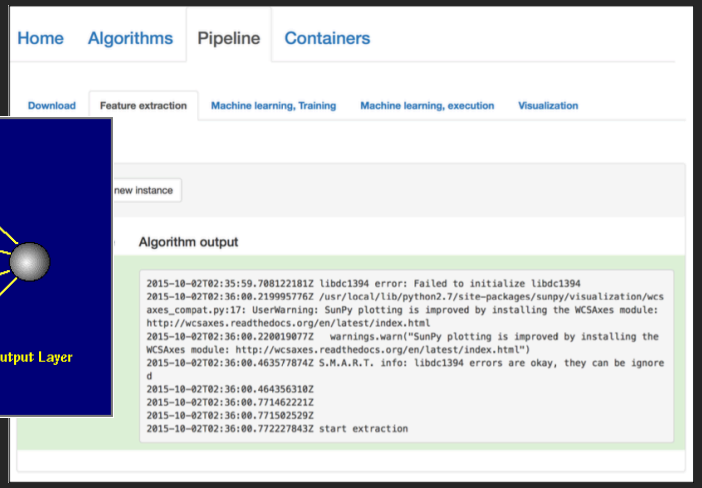
SCIENCE:
- Solar Physics
- Artificial Intelligence
- Validation
- Exploration

INFRASTRUCTURE:
- Hardware
- Software Development

COMMUNICATION
- End Users
- Gov & Industry
- Public



Credit: Celestial dreams



Expected Outcome

The FLARECAST forecasting service will be openly accessible, featuring open-source software that will allow end users to perform their own tests. In this synergistic way, FLARECAST will both revamp solar flare prediction and contribute to a better understanding of the drivers of flare activity at the Sun.

Consortium Partners:

- Academy of Athens, Greece
- Trinity College Dublin, Ireland
- Universita Degli Studi Di Genova, Italy
- Consiglio Nazionale Delle Ricerche, Italy
- Centre National de la Recherche Scientifique, France
- Université Paris-Sud, France
- Fachhochschule Nordwestschweiz, Switzerland
- Met Office, United Kingdom

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