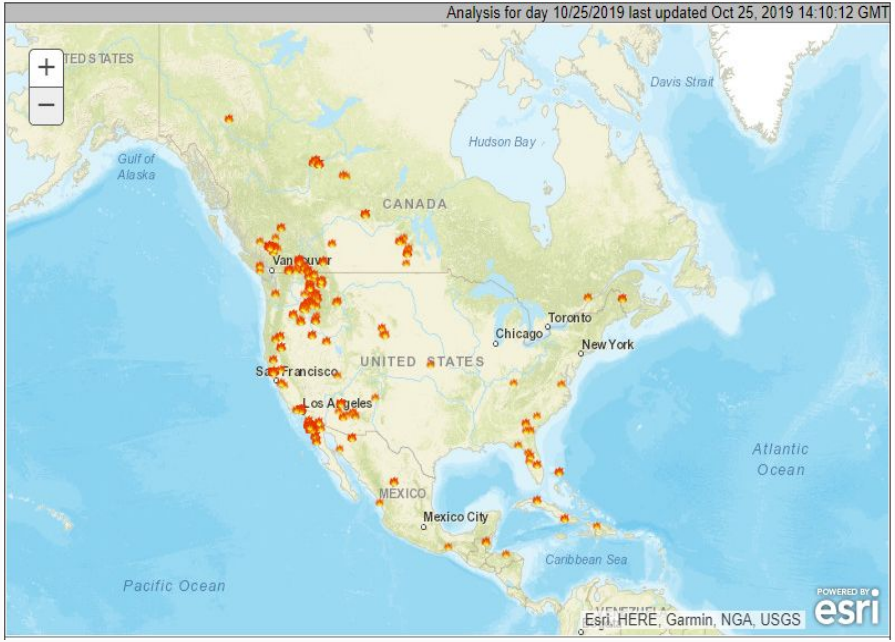
FAIM

Fractal Artificial Intelligence Model

Intro

Objective:

- To demonstrate the versatility, speed, and efficiency of the FAIM model
- We wanted to work on a problem that has a high social impact. Hence, we chose the Office of Satellite and Product Operations (OSPO) dataset. The objective was to predict fires even before they occur.



Description of WF-ABBA Dataset (Wildfire Automated Biomass Burning Algorithm Data)

Lon	Lat	Temp4	Temp11	Size(km2)	Temp(K)	Ecosys	Fireflag	FRP(MW)	Sat	YearDay	Time
-125.28	53.97	292.1	271.1	-9	-9	21	3	277	15	2019292	30
-123.21	54.74	287.6	270.5	-9	-9	17	3	219	15	2019292	100

- The **WF-ABBA** data is generated by automated algorithms in near real-time. An individual active fire detection location describes a GOES image element (pixel) therefore the fire pixels area/centroid may not coincide with the actual fire perimeter/center coordinate. In fact, the vast majority of fires detected will be sub-pixel in size.
- **Features & Importance**
- **Commission errors** (false alarms) may be observed in the satellite fire products due to ambiguity between actively burning fires and other thermal anomalies predominantly found during the sunlit part of the day.
- **Omission errors** will vary depending on the observation conditions and the fire characteristics. Normally, active fires must occupy a portion greater than 0.01% of the effective pixel area in order to generate a distinguishable signal. [Giglio and Schroeder, 2014]

Backup:

- As a back-up, we hacked the following set-up to demonstrate the versatility, speed, and efficiency of FAIM.

Thanks!

Contact:

Jeroen Joukes

jeroen@faim.ai

Jan Gerards

jgerards@faim.ai