**Title**: Satellite Imagery Pipeline – Automation from Space to Earth

**Speaking**: Location 360

**Keywords**:

Open source, Satellite imagery, Sentinel, Landsat, Amazon Web Services, Google Cloud Platform

**Abstract:**

This presentation will introduce an open source geospatial project, which (1) lively stream in satellite imageries on a global scale from multiple open sources in different cloud providers to a single platform; (2) perform multiple image processing and geoprocessing for land monitor in an agriculture context using open source python libraries; (3) serve image mosaics in a scalable geospatial platform on the cloud.

Highlights include but not limit to:

* Live stream of multiple satellite sources (Landsat-7, Landsat-8 and Sentinel-2 satellites) from different cloud providers, i.e. Amazon Web Services (AWS) and Google Cloud Platform (GCP);
* Scalable processes depending on product requests for targeted regions, sources of interest and time span;
* Multiple AWS services (EFS, S3, EC2, EBS, SQS, lambda etc.), Rundeck, Apache Kafka and Superset are leveraged to this application

Modules of this project are currently under development to embrace other types of geo-imageries, including imagery from Rover, Manned Aerial Systems (MAS/MAV), Unmanned Aerial Systems (UAS/UAV). We will share our success of this application and cover challenges that we have encountered working with open source data providers.