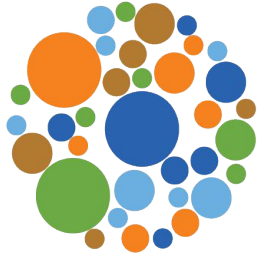# **2021 ML4EO Bootcamp:**
Lecture 5: SpatioTemporal Asset Catalog (STAC)

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Purpose of STAC

*The SpatioTemporal Asset Catalog (STAC) specification provides a **common language** to describe a range of **geospatial information**, so it can more easily be **indexed and discovered**.*
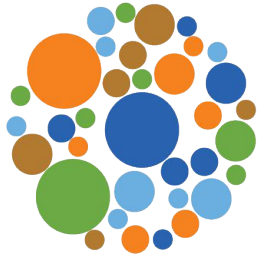
- *https://stacspec.org/ (emphasis added)*

Motivation

- ► Many different providers of remotely sensed data

- ► Many different APIs for search, discovery, and access

- ► Need a common language for search & discovery to reduce

STAC Philosophy & Vision

- ► Small, flexible, extensible

- ► Driven by real use-cases

- ► Linked documents + data

- ► Machine- & human-readable

- ► Cloud-native (JSON)

STAC Objects

Item

- ► Represents distinct spatio-temporal asset as JSON Feature
- ► Contains metadata + links to related documents & assets

Collection

- ► Logical grouping of Items
- ► Summarizes spatial, temporal, and other metadata

Catalog

- ► Common entry point for navigating STAC metadata
- ► Brings many Collections and Items together in a single location

STAC API

- ► Dynamic version of STAC Catalog

- ► Supports more powerful querying of Items

- ► Compliant with OGC API - Features

Resources

Website:
https://stacspec.org/

Core Spec:
https://github.com/radiantearth/stac-spec

API Spec:
https://github.com/radiantearth/stac-api-spec

Gitter Chat:
https://gitter.im/SpatioTemporal-Asset-Catalog/