



Radiant Earth  
Foundation

EARTH IMAGERY FOR IMPACT

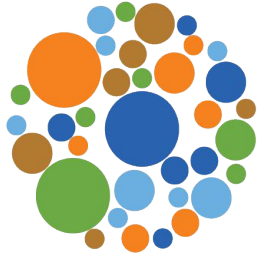
# **2021 ML4EO Bootcamp:**

## Lecture 5: SpatioTemporal Asset Catalog (STAC)

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Geospatial Software Engineer

# 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*)

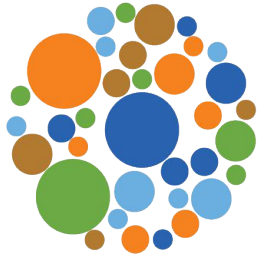
# Motivation



- ▶ 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/radianteearth/stac-spec>



## **Extensions:**

<https://stac-extensions.github.io/>



## **API Spec:**

<https://github.com/radianteearth/stac-api-spec>



## **Gitter Chat:**

<https://gitter.im/SpatioTemporal-Asset-Catalog/>

