EROS MODERATE RESOLUTION IMAGING SPECTRORADIOMETER

API Documentation 2020

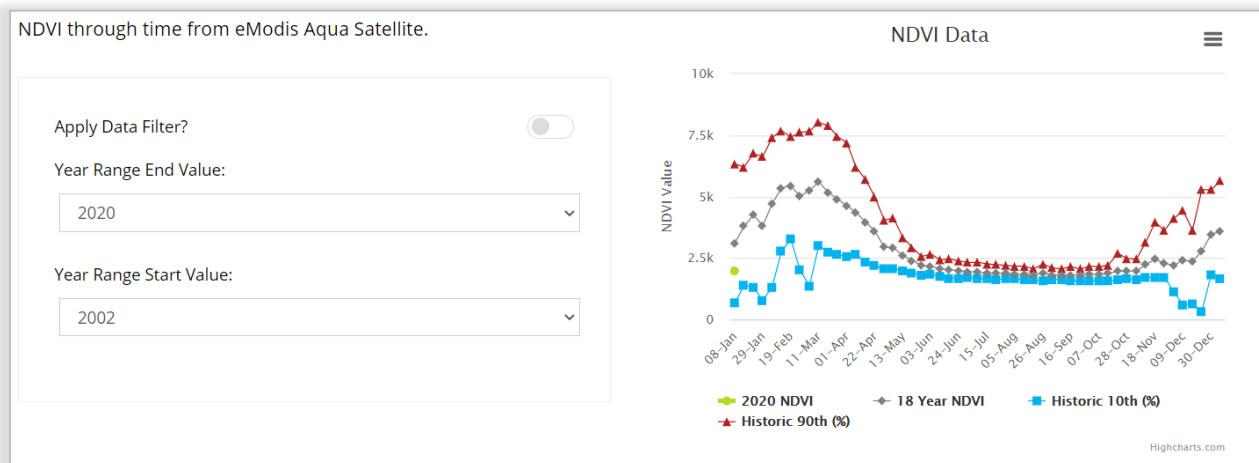⤴ API Portal | ⤴ GitHub Repo | ⤴ Jupyter Notebook | ⤴ Purchase

Service Overview

The Ag-Analytics EROS Moderate Resolution Imaging Spectroradiometer (eMODIS) API provides a Normalized Difference Vegetation Index (NDVI), which quantifies vegetation by measuring the difference between near-infrared (which vegetation strongly reflects) and red light (which vegetation absorbs). Overall, NDVI is a standardized way to measure healthy vegetation. When you have high NDVI values, you have healthier vegetation. When you have low NDVI, you have less or no vegetation.

eMODIS NDVI API in FarmScope

GET Request

GET Request Example – application/json

https://ag-analytics.azure-api.net/eMODIS/?year={year}&shape={shape}&filtered={filtered} &startYear ={startYear}

```
{
"year": "2019",

"shape": "{"rings":[[[-91.42396, 38.285882],[-91.424146, 38.285908],[-91.424585,
38.285883],[-91.424669, 38.285878],[-91.424981, 38.2857],[-91.425093,38.285636],[-
91.425162, 38.285572]]],"spatialReference":{"wkid":4326}}",

"filtered": "true",

"startYear": "2002"

}
```

Header Parameters

Ocp-Apim-Subscription-Key: Subscription keys are given upon purchase -   Purchase APIs ⬀

Request Parameters

Parameter	Data Type	Required?	Options	Description
year	String	Yes	"2018", "2019"	The year of which you would like to receive data up to.
shape	ESRI Polygon shape	Yes	Polygon, Point, Polyline Geometry Objects	The shape information for field in Esri Geometry Object format. Standard open source JavaScript front-end libraries (e.g., Leaflet) can be used to structure the shape.
filtered	String (boolean)	Yes	"true" or "false"	Filter values using modified Savitzky–Golay filter.
startYear	String	Yes	"True", "False"	The year you would like the historical range to start.

GET Response

GET Response Example (Snippet) – application/json

```
[{"CurNDVI":[{"NDVI Value": 4021.04639680028, "Week":1},{"NDVI Value":
3620.3231928863, "Week":2},{"NDVI Value": 3195.59447740824, "Week":3},{"NDVI
Value" :2859.18233256448, "Week":4},{"NDVI Value": 2675.16368507228,"Week":
5},{"NDVI Value": 2567.76537041684,"Week": 6},{"NDVI Value":
2696.49870573439,"Week": 7},{"NDVI Value": 3025.80141728292,"Week": 8},{"NDVI
Value": 3421.28076755878,"Week": 9},{"NDVI Value": 3908.07598790528,"Week":
10},{"NDVI Value": 4409.55960425976,"Week": 11},{"NDVI Value":
4892.17021036491,"Week": 12},{"NDVI Value": 5372.84961509767,"Week": 13},{"NDVI
Value": 5872.90073226676,"Week": 14},{"NDVI Value": 6375.60541426011,"Week":
15},{"NDVI Value": 6830.67834287567,"Week": 16},{"NDVI Value":
7287.33931599644,"Week": 17},{"NDVI Value": 7666.31654970462,"Week": 18},{"NDVI
Value": 7911.13051264432,"Week": 19},{"NDVI Value": 8043.7390165862," Week":20},…
```

Citations:

- Esri Geometry Objects Metadata:
  http://resources.esri.com/help/9.3/arcgisserver/apis/rest/geometry.html

- Esri ArcGIS Documentation – **Geometry Objects:**
  https://developers.arcgis.com/documentation/common-data-types/geometry-objects.htm

- NASA eMODIS Data: **https://catalog.data.gov/dataset/emodis**

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Please contact **support@analytics.ag** or **josh@ag-analytics.org** with any comments or questions.

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