**Geostreams Data Framework**

The geostreams Data Framework provides data management capabilities and web application interfaces for the management and visualization of geostreams data.

To maximize flexibility in supporting heterogeneous data sources, the framework includes four components:

1. a geo-temporal web service API to store and serve the normalized data
2. a geodashboard web application providing web interfaces to visualize, interact and retrieve the data
3. data parsing software libraries written in Python to normalize the data from different data sources into one common schema
4. Clowder, a web based data management system to store, curate and analyze raw files and associated metadata.

The four components interact to provide pre-processing, cleaning, and visualization of geospatial earth science time series data such as water health data. The raw data from various sources are ingested into the geo-temporal web service API using a variety of data parsers. The parsers organize raw data into an information model composed of three main entities: sensors, streams, and datapoints. The geo-temporal API web service provides methods to query the ingested data by different software clients, including the geodashboard web application.

Projects currently using and developing the software:

- Great Lakes Monitoring
  - [https://greatlakesmonitoring.org/](https://greatlakesmonitoring.org/)
  - Wiki
- Great Lakes to Gulf Virtual Observatory
  - [https://greatlakestogulf.org/](https://greatlakestogulf.org/)
  - Wiki
- Intensively Managed Landscapes Critical Zone Observatory
  - Wiki
- TERRA-REF
  - [http://terraref.org/](http://terraref.org/)

Source code:
- [https://opensource.ncsa.illinois.edu/bitbucket/projects/GEOD](https://opensource.ncsa.illinois.edu/bitbucket/projects/GEOD)

Task management:
- [https://opensource.ncsa.illinois.edu/jira/projects/GEOD/issues](https://opensource.ncsa.illinois.edu/jira/projects/GEOD/issues)

Recently Updated

- **Diego Rivera**
  - Geostreams Tech Weekly Update updated Dec 03, 2020 • view change
- **Marcus Siavenas**
  - Geostreams Tech Weekly Update updated Dec 03, 2020 • view change
- **Kaveh Karimi Asli**
  - Geostreams Tech Weekly Update updated Dec 02, 2020 • view change
- **Aaraj Habib**
  - Geostreams Tech Weekly Update updated Dec 02, 2020 • view change
- **Jong Lee**
  - Geostreams Data Framework updated Nov 30, 2020 • view change
- **Aaraj Habib**
  - Setting up a new project [WIP] updated Oct 29, 2020 • view change
  - docker-compose.yml attached Oct 15, 2020
- **Aaron Hoyle-Katz**
  - Geostreams Tech Weekly Update updated Oct 05, 2020 • view change
- **Aaraj Habib**
  - Sharing data between multiple projects updated Oct 01, 2020 • view change
- **Jong Lee**
  - Geostreams Tech Weekly Update updated Sep 08, 2020 • view change
- **Luigi Marini**
  - Geostreams Tech Weekly Update updated Sep 03, 2020 • view change
- **Shannon Bradley**
  - 2020-09-03 - GeoStreams Tech Meeting created Aug 28, 2020
  - 2020-08-27 - GeoStreams Tech Meeting updated Aug 27, 2020 • view change
- **Luigi Marini**
  - 2020-08-27 - GeoStreams Tech Meeting updated Aug 27, 2020 • view change
- **Shannon Bradley**
  - GeoStreams Dashboard updated Aug 27, 2020 • view change