Project Wicced ML

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Project WiCCED

Assessing threats and developing solutions to mitigate human, agricultural, and natural pressures threatening water security in Delaware's changing coastal environment.

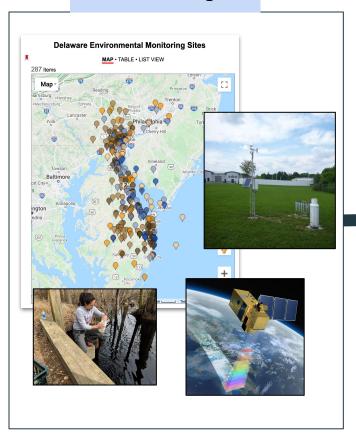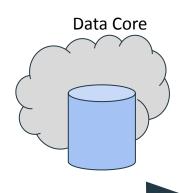https://projectwicced.org/

algal blooms

salt water intrusion

flooding

sea level rise

Project WiCCED ML

● Goals

Improve data access for researchers

- ○ Beginning: Review Python code, become familiar with and set up project, and test setup; CAREERS project Launch presentation

- ○ Middle: Rewrite existing API as needed, document inside code, upload code to GitHub.

- ○ End: Develop wiki documentation with use-cases for users to understand and use the Python API with user testing; CAREERS project Wrap-up

Project WiCCED ML

● Timeframe

- ○ Start date: April 1, 2021
- ○ End date: July 14, 2021

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- **What we accomplished**
  - Constructed a wiki, readme.md with detailed instructions
  - Tested out Python code that was able to retrieve, use data
  - Rewrote existing Python code to perform additional functions
  - Had outside users test out documentation.

We have created a wiki to help support researchers accessing the system.

Within the wiki you will find the following pages:

1. Getting Started (First Steps) - This will help you get all configurations set and ready to access the data.

2. Methods:

   - addDate - to help format requested dates into the proper format
   - addDataType - to get specific type of data out of a list
   - Get_full_query_by_month - used to specify data grabs by month
   - addBox- specify a bounding box to return data only falling inside the box
   - addDateRange - specify a date range and return data inside that date range
   - changeFormat - specify data format for the data returned
   - buildURL- creates the fully parameterized url for call to geoserver
   - Seperate_by_location- returns data by location (and time)

3. Features/Information in Documentation:

   - Instantiate wicced.py
   - Define URL for data access
   - List features or data available
   - Specify data type of interest
   - Specify a date or date range
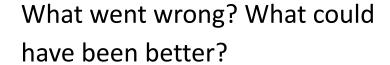   - Define a bounding box
   - Export to CSV or JSON file types

Project Contributors This code was developed for researchers working with Project WiCCED Data Core.

For questions, please contact tina.callahan@udel.edu

Lessons Learned

What went well?

- ○ Construction of the documentation
- ○ Testing of code, putting new features
- ○ Developed a better technical writing style
- ○ Developed knowledge of GitHub, Python libraries and Project WiCCED

What went wrong? What could have been better?

- Communication
- Lack of Confidence
- Problems looking up issues

Publications/Contributions

- My contributions
  - https://github.com/mshatley/epscor
  - https://github.com/mshatley/epscor/wiki/Getting-Started
  - https://github.com/mshatley/epscor/wiki