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CPLN 680 Advanced Topics in GIS

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02-18 Project Proposal 1

**Motivation**

* Current work at the Water Center brought me an exploration of the Delaware River and Philadelphia Recreations. That project used to take communities into consideration which provided me an opportunity to read some relevant research about the relationship between waterfront recreation and communities, especially what makes a recreation site valuable to the community. Even though the project of the Water Center moved goal and gave up of the community part, I still want to explore more about it.
* Team members and my friends all talk about wishes to fish and picnic in waterfront recreation but sometimes don’t know where to go and what they can do there. This inspired me to make a more straightforward website or app that could guide people to understand which activities are available and safe in each recreation site.

**Topic**

* Guide residents make a choice of waterfront recreation sites in Philadelphia
* Format: A research paper with GIS analysis about a substantive question
* Possible data sources:

PPR data:

https://www.phila.gov/departments/philadelphia-parks-recreation/

circuit trails, Indigo station, bus station, SEPTA station

**Existing relevant research**

* *Recreational uses in the Delaware River - Laying the Foundation*, written by Gayle Killam and Ellen Kohler.

This research provides sufficient information to clarify the value of ongoing activities of recreational places and offer perspectives for prioritizing future activities.

**Method (in progress)**

* Score the recreation sites for different activities(unvarying) and weather(varying)
* Activities include swimming, wading, jet skiing, paddle boarding, kayaking, paddle boating, motor boating, sail boating, and fishing.
* Each recreation site has its own provided list of these activities, but weather such as outdoor temperature, flow velocity, water temperature, nearby CSO volume, and water quality (bacteria indicator: E.coli or Enterococci) might also be an essential part for residents to choose the right place.
* Other information could also be provided to residents, such as facilities, tree density, and boat launches.

This project aims not only to help people choose the right waterfront recreation site to visit even they have different purposes such as picnicking, fishing, and kayaking but also to let people be informed on the fairest opportunities to access recreational activities for each resident in the safest possible way. An unvarying score of each waterfront recreation site could be delivered as a report, and a varying score could be provided as a website or app, which will also include indicators of the unvarying score.

**Most Immersive:**

Swimming, Wading, Jet Skiing, Paddle Boarding, Kayaking

**Moderately Immersive:**

Paddle Boating, Motor Boating, Sail Boating

**Least Immersive:**

Fishing

Map

Description automatically generated

Map

Description automatically generated

CSO volume data

Graphical user interface, text, application, email

Description automatically generated

Calendar

Description automatically generated

Simply convert from 15 secs to daily

Table

Description automatically generated