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CPSC 490 Special Projects

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An Interactive Floor Plan of the Yale Center of British Art

Abstract:

The Yale Center for British Art in downtown New Haven houses the largest collection of British Art outside the United Kingdom. Its 4-stories are filled with collections and exhibitions meant to amaze and spur conversation. Currently, visitors navigating YCBA are invited to use markers located throughout the building and a floor plan (<http://britishart.yale.edu/visiting/floorplans>) on the YCBA website; however, the floor-plan is non-interactive and difficult to change as exhibits come and go. For this project, we plan to create an interactive map of the YCBA gallery locations showing which works of art are in each bay in real time using d3JS, a powerful JavaScript library used to create interactive data visualizations on web browsers. We will use YCBA's Open Linked Data dataset, queried using SPARQL.

Deliverables:

In order to create this interactive map, we must:

- Do background research: We will explore existing museum websites to see how do they represent the physical layout of their physical museum and its contents. If time permits, an in-person expedition will be made to some museums in NYC (like the Metropolitan Museum of Art and Museum of Modern Art) to explore how they guide visitors around the museum.

- Exploring types of visualization: Given that there are multiple data items describing a work, and that there are many visual attributes that could be used to encode them, we will experiment to find the most effective visualization type to represent them.
- Became familiar with d3JS: Since d3JS is a popular JavaScript Library, we will explore its functionality using various online tutorials and resources.
- Become familiar with Open Linked Data and SPARQL: Compared to Google Big Query, Open Linked Data is much more suitable for the kind of data stored and queried for art historians. We will explore the intricacies of Open Linked Data and SPARQL by contrasting it to Google Big Query.
- Use <http://britishart.yale.edu/collections/using-collections/technology/linked-open-data> for the data that will appear when using the interactive map and the floor plans provided by YCBA.
- Time permitting, we will try to integrate a Google Map component — perhaps to relate a work to the location where it was produced and/or the location it is meant to represent. Other works in the collection tied to the same geographical location could be highlighted in the museum representation.

Timeline:

- February 11: Abstract due
- February 19: Research on Open Linked Data vs Google BigQuery; practice querying from Open Linked Data
- February 26: Research on d3JS: practice d3JS tutorials

- March 4: Research on Google Maps: experiment with their API
- March 11: Research on Museum navigation: make d3JS and Open Linked Data work together
- April 1: have a prototype ready and submit to YCBA staff for feedback
- May 6: add Google Maps to prototype and integrate suggested enhancements