Etsy Craft Meet Up

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Abstract

In combining Etsy, Google Maps, and Yelp, our web application suggests venues where Etsy users can congregate to either craft or sell their products. Etsy provides the web application's audience, Google Maps maps out their location, and Yelp helps find possible venues for Etsy users to meet. Etsy users can opt into participating in the application to create or search for nearby events, view favorite locations, and view friends' events. The application is designed to facilitate ease of filtering through and viewing nearby venues, Etsy users, and events. Its goal is to help Etsy users become more social by meeting people or weekly groups with similar interests near their location, and to help Etsy users sell their products.

Introduction

Etsy is an online marketplace for handmade crafts build by individuals around the world, located at http://www.etsy.com. People create unique products and sell them online, forming personal profiles to include their seller location and other information, which can be retrieved from the Etsy API. We correlated this structured dataset with Google Maps and Yelp. Yelp, located at http://www.yelp.com, helps people find, rate, and describe local businesses. Google Maps is a map, location, and directions service, whose API allowed us to map out the location of Etsy users, Yelp locations, and events.

We wanted to help Etsy users get together and create events based on their friends, location, and interests. Our application lets users log into their Etsy account and view a map of their location, with map markers pointing out nearby Etsy users, Yelp venues that they could possibly meet or have an event at, and currently created events. Users can also have a set of favorite locations and friends who are listed on the right-hand side of the screen, and when clicked on, will jump to their location on the map. Users can create events on the right-hand column, inviting a set of users and providing a name, date, and description of the event.

Implementation

Our project dealt with linking and aggregating semantic data across the Etsy, Yelp and Google Map API, based on the concept of linking semantic data which was discussed thoroughly in class. Etsy Craft Meet Up combines data from Etsy, Yelp and Google Maps. Etsy provides the data needed to plot our audience and user locations on a visual map. Yelp provides the meeting

locations and rating of those locations. Google Maps is the integrating platform that visually displays our linked data. Each dataset was acquired via RESTful API call, which was one of the topics discussed in class. We did some programming with javascript to call API information and create json strings, another concept from class, and then we included the javascript into the main application through PHP. Due to restrictions on the Yelp and Etsy APIs, our group did have to resort to some building in of data to implement into our demo.

Etsy

The first problem encountered was related to Etsy's OAuth Authentication. This gives developers access to Etsy users' personal information such as their addresses. OAuth is given to applications that have already been created and deemed safe by Etsy staff. Based on the way we wanted to use Google Maps, we wanted access to the latitude and longitude of each user. Since we could not get access, we instead found a 'Team' based in Ithaca called the Ithacan Localistas, which consists of 43 active Etsy users. Teams represent a community of users on Etsy. Using the findAllUsersForTeam() method, we were able to compile a list of Esty users that were part of this team. PHP was used to make the RESTful API request. The request URI was:

$baseurl="http://openapi.etsy.com/v2/teams/5415/users/?api_key=qy3421z4qd9vqmex5ssa8bfk"
;

Through cURL requests, a json string was returned with all members of Ithacan Localistas. To make each member's latitude and longitude, we generated a set of 43 random coordinates through the help of the site geomidpoint.com/random. These coordinates were incorporated into the json string so that the Etsy data was formatted in the following way:

```
[
        {"name": roundabout,
        "etsy_user_id": 68093,
        "etsy_uri": http://etsy.com/people/roundabout,
        "latitude": 42.54082004,
        "longitude": -76.51552057,}
…]
```

The json string was turned into a JavaScript variable so that it could be parsed by the Google Maps file.

Yelp

Yelp places a cap of 100 results per day on applications that are not commercial. Due to this limitation, Yelp data was scraped in a similar manner as the Etsy data. No modifications had

to be made to the string but the data was built into the demo because live data made the demo unreliable due to the restriction. The following is the format of the Yelp json string:


```
[
    {"id": "ithaca-farmers-market-ithaca-2",
    "img_url":
        "http://s3-
        media1.ak.yelpcdn.com/bphoto/gt1Nm4FAYg_PvIbPZ5yfWQ/ms.jpg",
    "url": "http://www.yelp.com/biz/ithaca-farmers-market-ithaca-2",
    "name": "Ithaca Farmers' Market",
    "latitude": 42.444327,
    "longitude": -76.512547,
    "rating": 4.5,
    "rating_img_url_small":
        "http://media4.ak.yelpcdn.com/static/201012161127761206/img/ico/stars/
        stars_small_4_half.png",
    "phone": 6072737109,
    "address": "435 Old Taughannock Blvd",
    "city": "Ithaca",
    "state_code": "NY",
    "country_code": "US"}
...]
```


Google Maps

Google Maps provides the canvas for the Yelp and Etsy data where visitors can see who the Etsy users are, where the events are taking place, and potential venue data. It parses the latitude and longitude from the Yelp and Etsy json strings and plots them visually on the map body. Three sets of marker icons represent Etsy users, events, and venues. Etsy users are marked by blue user icons, Yelp events are marked by red location icons, and created events are marked by square red event icons. When a user clicks on one of these icons, parsed data from the json string related to the point is displayed. It is possible to link to Etsy and Yelp from user and location pop-ups. Event boxes give links to the users on the map who are attending the event, as well as a link to the venue data on the map.

Event Data

To create events on Etsy Craft Meet Up, users only need to click the “Select User” button and then select a user from the map (marked by blue user icons). Once they have done this for each individual they want to add to the event, clicking on the “Select Location” button and then selecting a venue from the map (marked by red Yelp location icons) highlights that venue.

Filling in the form's event name, time, date, and description, and then clicking "Create Event", creates the event the user has designed. If the user makes any errors in selecting users to invite, they can clear selections with the "Clear Selections" button. Once the user has completed their event, s/he must then click "Save Events" to make the event public to other Etsy users on Etsy Craft Meet Up. The following is the format of the json string created when a user saves an event:


```
[
    {"latitude":42.444327,
    "longitude":-76.512547,
    "name":"Pinata Making Party",
    "time":"2:48pm to 7:56pm",
    "date":"December 8, 2011",
    "description":"Bring your old newspapers, we'll supply the balloons, glue, and
    candy. It will be a grand time!",
    "type":"event",
    "users":[3,20,5,24],
    "location":44,
    "creator":"PANTHAFASHION",
    "id":147}
...]
```


Effort

We began our project by splitting up the different APIs to become familiar with between group members. Sophia focused on Etsy user data, Samuel on Google Maps, and Katherine on Yelp. We first individually learned to grab the data we wanted from these sources, and then put them together. As previously mentioned, there were some issues with grabbing the appropriate data from Etsy because the API required a working application before letting developers take a lot of information, and there were some issues with Yelp because they limit the amount of searches one can perform per day and we wanted a lot more results for potential venues. However, we worked around these complications to retrieve enough data for our application to function.

Sophia came up with the basic concept of the idea of integrating Etsy into some sort of event-creation application. Samuel had the most experience with coding and did a lot of the back-end programming of our application, though Sophia and Katherine did contribute to the coding, especially integrating their specified data. The aforementioned problem with doing large numbers of Yelp searches did have to go more in-depth with programming, which Samuel had more experience with. Sophia and Katherine worked on the aesthetics, including Sophia's graphics and Katherine's formatting of the data in the pop-ups when clicking markers on the

map. They also worked on the various papers until the project's completion. All members of the group played a role in designing and coming up with the topic, and thinking of new features to add.

Future Possibilities

Our project has the capacity of expanding far beyond what we have implemented so far. One of the main things is joining events: right now, you can select a number of users and a location and say that those people are going, but you cannot invite, decline, or join events. For the purpose of our project we did not find it necessary with the time constraints, since we already successfully linked the data in Etsy Craft Meet Up as intended. It would also be good to be able to edit and delete your own events, and alert attendees of when updates are made. It would also be convenient to see a list of events you are attending and events you have attended in the past, but implementing it for this version of our project is unnecessary.

We considered finding the closest location and the distance of locations from users, but decided that since that is already a feature on Google Maps, it is unnecessary for the purpose of our project. However, if we were to pursue our project professionally, having that data immediately available on our application would be convenient for users.

A very important thing we would consider if we pursued Etsy Meet Up further is a feedback system where the user can rate places that are suggested by Yelp either up or down on whether it's a legitimate meeting place or not. Yelp does a good job at suggesting places, but not all places are good for actually meeting We have no way of automating results on how large locations suggested by Yelp are, so being able to rate that locations as either "good" or "bad" places to meet would be a good idea for the future of our project. Also, being able to tag locations as things like "good for small parties" or "good for craft fairs" would be effective in helping users find an appropriate place to hold their particular event.