

The slide features a solid blue background. On the left and right edges, there are decorative patterns of overlapping, colorful chevron-like shapes in yellow, magenta, cyan, and grey, pointing towards the center.

YukOrYay

Local opinion mining web app

by Joe Haaga, Joe Crandall and Akbar Sattar

Basics

- YukOrYay is a local opinion-mining project for curious people
- geo-tagged social media posts are taken along with useful metadata
- Sentiment is algorithmically determined by words in the post
- Posts are displayed geographically

Development over time

- During original brainstorming wanted app that displayed Yaks & Locations
 - took uniquely identifying UserID into table
- Deemed it not ethically sound/facilitating to user privacy
- Decided to revamp and make it more utilitarian
- Was going to expand to other forms of social media (i.e Facebook / Twitter)

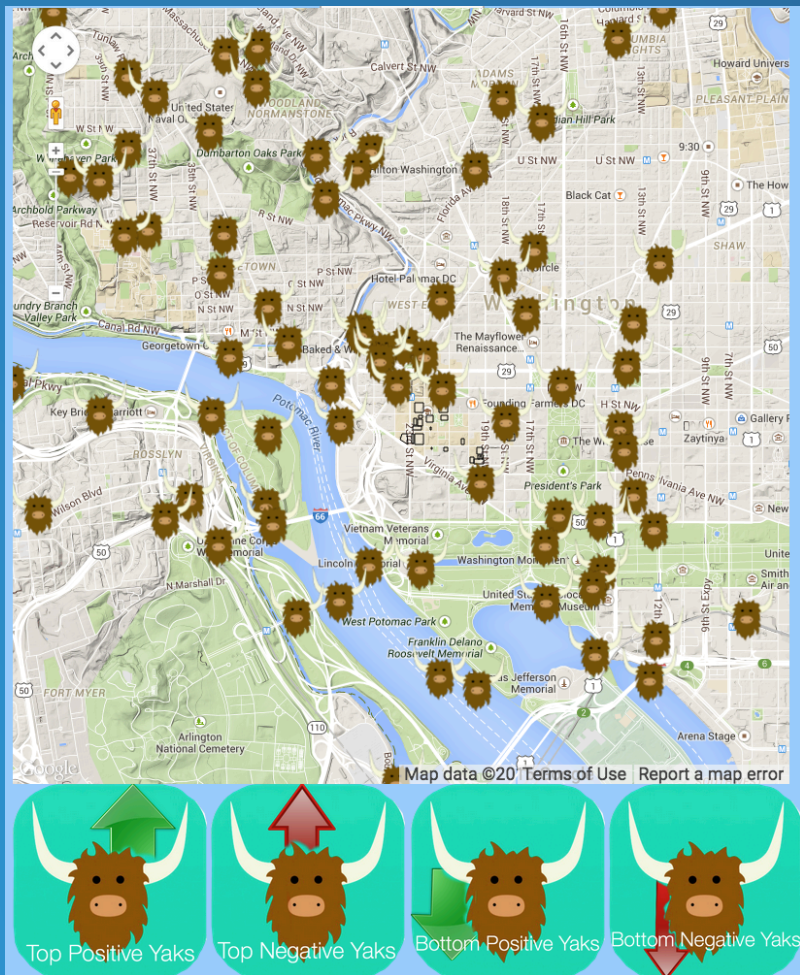
Original Requirement Analysis

- *Requirement analysis:* A list of the different types of users your application involves, and their requirements.
 - Developer
 - Architect
 - Database administrator
 - Maintain and validate records
 - revision control/conflict resolution
 - End user
 - manipulate web app, querying database and visualizing aggregate results

First UI

Map → → →

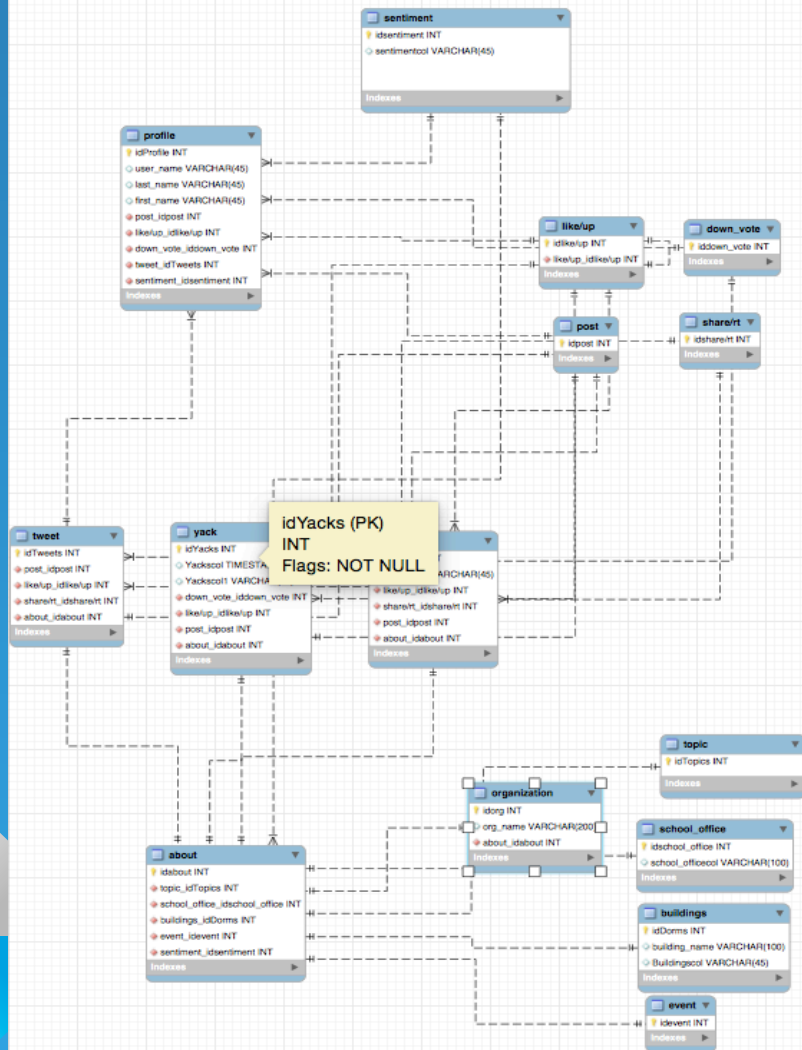
Yaks →



Filter

← Buttons

Database Schema

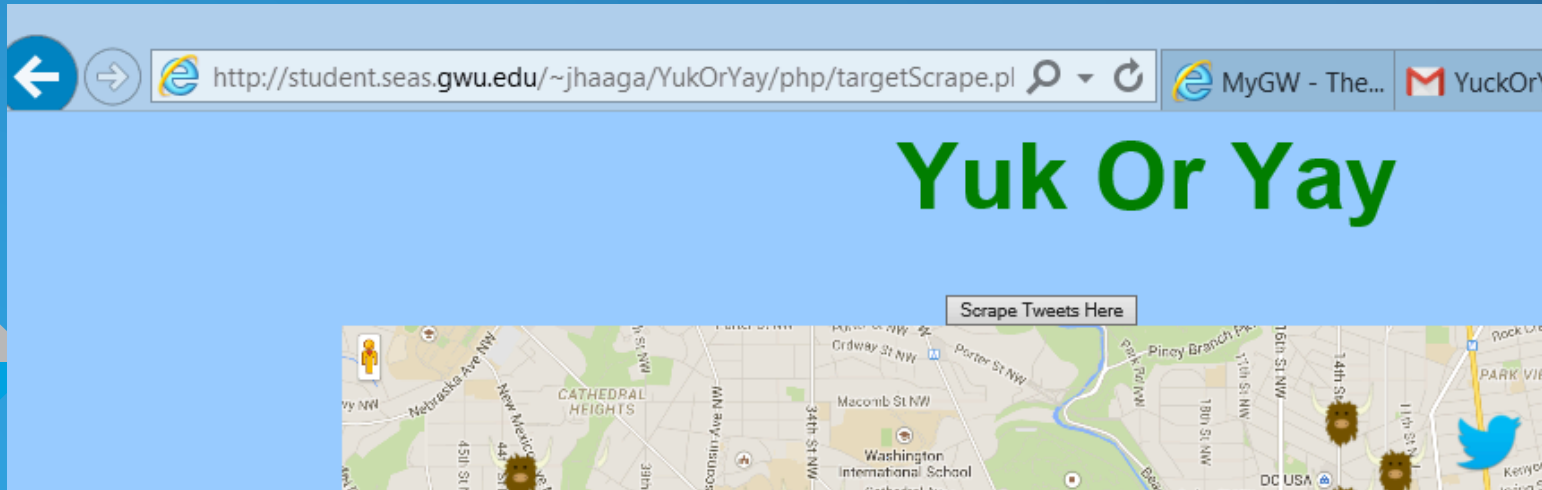


PHP Database interaction

- `$conn = new mysqli($credentials);`
- `$sql = "SELECT * FROM Tweets.."`
- `$results = $conn->query($sql)`
- `for(result in results){`
 - `json_encode(result);``}`

SEAS Hosting

WinSCP/CyberDuck made it possible to host the files on SEAS' very own student server.





PHP requests for tweets

Using J7mbo's Twitter API, accessing
Twitter's RESTful API

HTTP reqs

```
$url = 'https://api.twitter.com/1.1/search/tweets.json';  
$queryCoords = $_GET["lat"] . ',' . $_GET["lon"] . ',.5mi';  
$getfield = '?geocode='.$queryCoords;  
$requestMethod = 'GET';  
$twitter = new TwitterAPIExchange($settings);  
$arr= $twitter->setGetfield($getfield)  
.....->buildOauth($url, $requestMethod)  
.....->performRequest();  
$// echo print_r($arr);  
$results = json_decode($arr, true);  
$// echo print_r($results['statuses'][1]["text"]);  
$// echo print_r($results['statuses'][1]["geo"]["coordinates"]);
```

Sentiment Analysis

JWHennessey's phpInsight API handled classification

```
require_once __DIR__ . '/phpInsight-master/autoload.php';  
$sentiment = new \PHPInsight\Sentiment();  
$scores = $sentiment->score($string);  
$class = $sentiment->categorise($string);
```

String: But on the bright side @tagalongtina is making me a sandwich later

Dominant: pos, scores: Array

```
(  
    [pos] => 0.5  
    [neu] => 0.25  
    [neg] => 0.25  
)
```

String: Performing in my final university chorale Spring #concert! It's been such a joyful pleasure to #sing all these years, I'm so grateful!

Dominant: pos, scores: Array

```
(  
    [pos] => 0.667  
    [neu] => 0.167  
    [neg] => 0.167  
)
```

TargetedScrape

This page does not work with IE < 9.0

Live demo

[http://student.seas.gwu.edu/~jhaaga/
YukOrYay/php/homepage.php](http://student.seas.gwu.edu/~jhaaga/YukOrYay/php/homepage.php)