

You are here: GeoSearch

GeoSearch

Search by keyword or phrase Search



Filter

Resource Type

- Members
- Jobs
- Events
- Organizations

Tags

Location

Within:

Miles

of:

place, address, or zip

Clear Filter

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HABRI Central

A Geospatial Search Component for HUBzero

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HABRI Central

- www.habricentral.org
- Built upon HUBzero platform
- Open access resource hub and community for research on the relationship between humans and animals
- Library of audio, video, documents, articles, and datasets
- Community features
 - Forum, Groups, Wiki
 - Events, Jobs, Members



Motivation

- Users expect to find information near specific locations
 - Events
 - Jobs
 - Organizations
- Build better user community – member information on a map is more engaging than a list
- Visualizing information
 - Distribution of members, events, and jobs
 - Distribution of specialties (veterinary medicine, psychology, sociology, etc.)



GEO Search

- Use member profile information, events, jobs, and resources contributed by users
 - Geocode user location information in member profile using Google Maps API
 - Geocode new entry on-the-fly
 - Users can also manually input location information
- Map displays all information on startup
 - Users use search to narrow down information items on map
 - Search within a radius of a location
- Search scope
 - Members, Jobs, Events, Organizations
 - Tags

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Location

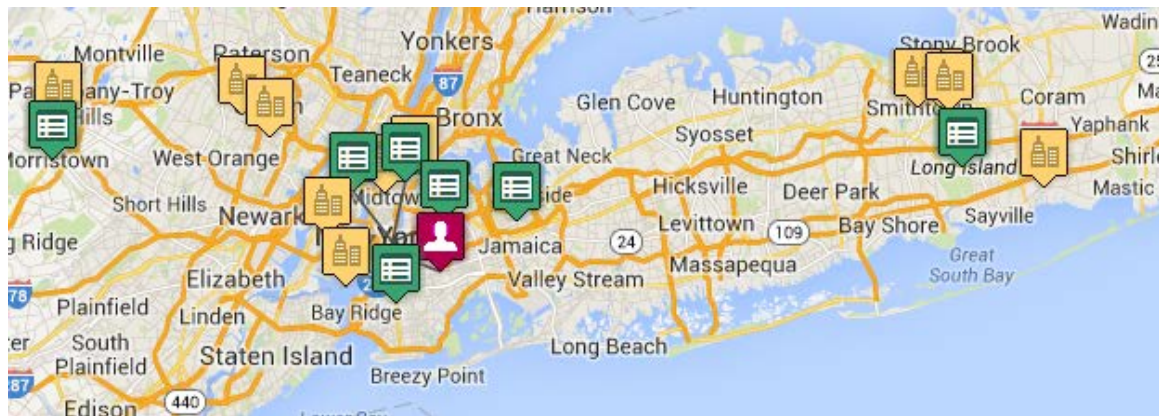
Within:

Miles

of:

<https://habricentral.org/geosearch>





The Interface



Map Display

Filter

Resource Type

- Members 
- Jobs 
- Events 
- Organizations 

Tags

cats x tacos x

Location

Within:

500

Miles ▼

of:

Purdue University

Clear Filter

Resource Type

Narrow down results to at least one category

HUBzero Tags

Add one or more associated tags

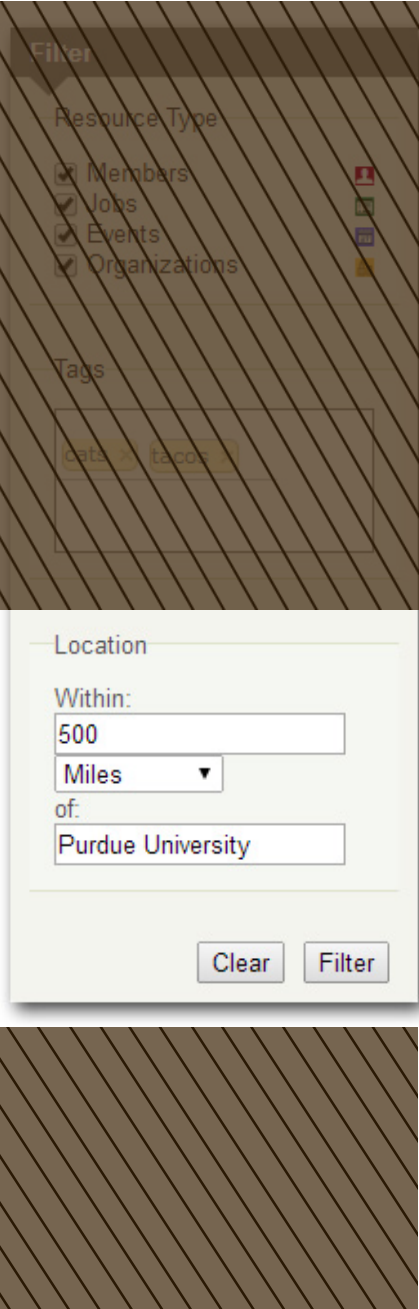
Tag search is inclusive (“AND”)

Location

Define search radius in miles or kilometers

Enter a name of place, location, or zip

Filter Results



Spherical Law of Cosines

$$\$R * \text{ACOS}(\text{COS}(\text{RADIANS}(\$lat1)) * \text{COS}(\text{RADIANS}(lat2)) * \text{COS}(\text{RADIANS}(lng2) - \text{RADIANS}(\$lng1)) + \text{SIN}(\text{RADIANS}(\$lat1)) * \text{SIN}(\text{RADIANS}(lat2)))$$

$\$R = 6371$ kilometers
3956 miles

$\$lat1, \$lng1 =$ center of place, location, or zip

Distance between Lat/Long points



Filter Results



Summary

- Initial user feedback
 - Information overview and visualization
 - Discovery tool
 - Easier to connect with other users with similar interests
- Users more willing to contribute information to HABRI Central
 - Demographic information
 - Tags
- GeoSearch as a HUBzero component