

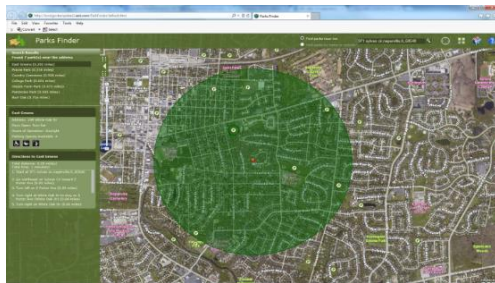
# GEOG 4/673 Web GIS, Spring 2015

**Instructor:** Dr. Byungyun Yang, **E-Mail:** [byungyun@udel.edu](mailto:byungyun@udel.edu)

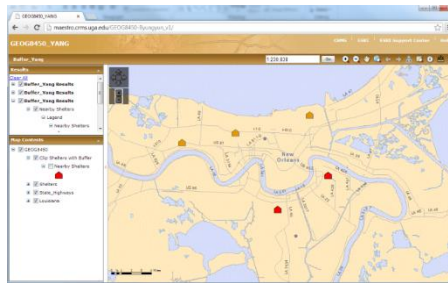
**Lecture:** 18:00 – 21:00 pm, Wednesdays, Pearson Hall 203. Cramer Hall (CH).

## Class Goals and Description

This course has a project-oriented learning and aims to nurture independent learning and develop research ideas motivated from student's interests using Web GIS applications. The course introduces current development of Web GIS technologies, its applications, and advanced cartography skills. Specially, through this course, we will learn how to use Web GIS mapping tools and how to publish web-enabled interactive maps using commercial internet map servers (e.g., ArcGIS Online, Esri Map for Office, and ArcGIS Server ) and even open source tools (Google Embedded HTML or GeoServer). Furthermore, you will learn not only how to publish GIS models (Vector and Raster models) on the Web, but also how to perform spatial analysis through the web mapping applications. The following shows some examples of the interactive online maps.



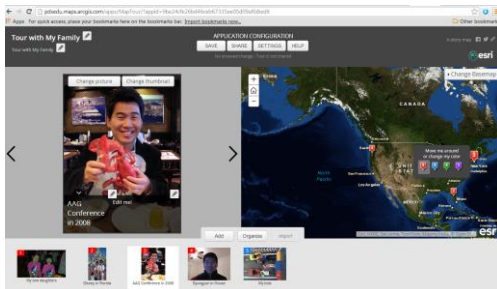
(a) Parks Finder (Buffering analysis developed by Silverlight API)



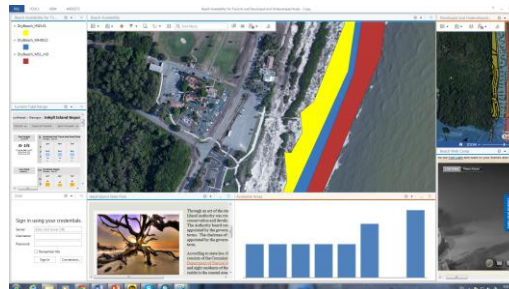
(b) Shelter Locations (Buffering analysis developed by Javascript API)



(c) Drug related CrimesCrim (Hot Spot Analysis in ArcGIS Online)



(d) Story Telling Map



(e) Operations Dashboard for ArcGIS



(f) Collector for ArcGIS/TerraFlex Mobile

## Finally, when you have completed the course, you will be able to

- ⇒ Design and implement your own interactive web mapping applications.
- ⇒ Author and publish map services to share your authoritative GIS data.
- ⇒ Gain ability to publish a variety of advanced web GIS application services.
- ⇒ Publish a geoprocessing service to share your GIS models and analysis results.
- ⇒ Publish a feature service to enable data editing in a web application.
- ⇒ Share GIS resources as stand-alone services and in web maps and web-mapping applications.
- ⇒ Share your research project with private and public sectors.
- ⇒ Gain hand-on experience as entry level Web GIS application developer.
- ⇒ Understand principals of web GIS and have research ideas with respect to Volunteered. Geographic Information Science (VGI)

## Class Prerequisites

Students are expected to have prior GIS experiences as covered in GEOG 372, 4/671, and 670 (Intro to GIS, Advanced GIS, or GIS).

**This class doesn't require students to have programming language experiences.** Thus it is not necessary to have any experiences from the programming language classes, but if students have little experience about the programming knowledge, it would be greatly helpful. Interested students are encouraged to talk with the instructor if not sure about the readiness to take this class.