

# Jiao Ma

Personal Website: <http://159.203.72.255>

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## PROJECTIVE

Web design and development summer internship

## EDUCATION

College of Science, George Mason University  
Department of Geography and GeoInformation Science  
Master in Geographic and Cartographic Sciences

Expected graduation Dec 2016

College of Forestry, Beijing Forestry University (BJFU)  
Bachelor of Science in Geographic Information System

Graduation Jul 2013

## SKILLS

- Programming: Python, JavaScript, HTML/CSS, XML
- Database: PostgreSQL, Microsoft SQL, Oracle
- Operation system: Windows, Linux
- GIS software: ArcGIS desktop platform, ArcGIS online, QGIS, GeoServer
- Remote sensing software: ENVI, ERDAS IMAGINE
- Cartography: Adobe Illustrator, Adobe Photoshop, CartoDB
- Microsoft Office software (Excel, PowerPoint, Word)
- Native Fluency in Mandarin Chinese

## PROJECT

Starbucks Locator in the U.S. — a web mapping application

Nov – Dec 2015

<http://159.203.72.255/Starbucks-Locator/overview.htm>

- Built an interactive web mapping application using open source Starbucks data
- Manipulated, organized and stored open source data in PostgreSQL Database client
- Set up a Ubuntu server and published geospatial data through GeoServer
- Built a query bar, which could search service, products, or spatial location, to allow user interactive with data
- Implemented functionalities such as change base map layer, visible or invisible Starbucks display, query information about Starbucks
- Coded with Leaflet, jQuery, CSS, Bootstrap, Mapbox and Google Maps API to design the web application

Mini GIS application compiled with Python

Nov – Dec 2015

Project slides could be download at [http://159.203.72.255/images/GGS 650 Project.pdf](http://159.203.72.255/images/GGS%20650%20Project.pdf)

- Found intersection points and intersection segments of United States Highways and major rivers
- Achieved seven functionalities: Zoom In, Zoom Out, Pan, Check Intersection, Check Intersecting Segments and Quit
- Used Tkinter to visualize user interface
- Extracted polyline data from U.S. Highways Shapefile and U.S. Major River Shapefile and saved into polyline objects
- Wrote a function for checking intersection, saved intersecting points into point objects, and saved intersecting segments into segment objects

Social Media as a Distributed Sensor System: a Case Study at 2015 Spring Festival in New York

Apr – May 2015

- Examined the number of tweets changing through the festival period, the relationship between Twitter involved and socioeconomic variables, for example, Asian population and Asian restaurants and

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- sentiment analysis
- Collected Tweets through Twitter API in NYC region during Chinese New Year, Asian population of NYC and Chinese restaurants at the census tract level
- Used keywords related to Chinese New Year like “Spring Festival”, “Chinese new year”, “dumplings” to filter tweets and stored the result into PostgreSQL
- Visualized geotagged tweets in CartoDB, and created a heat map
- Created a tagged cloud in Gephi to identify keywords people concern about during Spring Festival.

## GMU Connected: Linking the University to Itself and Its Spatiality

Apr – May 2015

- Created linked data Terse Resource Description Framework (RDF) Triple Language (TTL) for students and professors in GGS department
- Used vocabularies from Academic Institution Internal Structure Ontology(AIISO), FOAF Vocabulary Specification and Teaching Core Vocabulary Specification
- Obtained all information towards students, professors, GGS courses and GGS department from website and reconnected
- Linked OpenStreetMap to the George Mason campus profile to identify a particular building on the map

## An information management system for a parcel service company

Jun – Jul 2012

- Established a parcel service company's management information system in Beijing area
- Built a database based on Microsoft SQL 2000 to store and query product storage, staff information, customer information and delivery vehicles
- Published web application based on Microsoft SQL Server 2000 platform
- Designed user interface using HTML and .asp

## Pre-warning system of forestry lightning fire

Nov – Dec 2012

- Applied GIS knowledge and techniques to design a fire pre-warning system
- Implemented data analysis of lighting fire condition and created a database system
- Wrote user requirement documents and database design documents

## Digital campus of Beijing Forestry University

Jun – Aug 2010

- Applied Google Earth as base map for creating three-dimensional model
- Used Google SketchUp to build 3D model of buildings in Beijing Forestry University campus
- Took photos of each building's external and manipulated in Photoshop for 3D model texture

## **ADDITIONAL EXPERIENCE**

### 2011 National University GIS Skills Competition

- Goal: applied GIS methods and technology in solving practical problems such as check influenced area by railway expansion and evaluation the expense of relocation
- Responsible for image rectification, digitizing, spatial analysis with the aid of MapGIS, writing an analysis report
- Won the 3rd prize in spatial analysis of operating skills group and awarded with the certificate of MapGIS cartographic Engineer

## **VOLUNTEER EXPERIENCE**

### GMU OpenStreetMap Mapathon Volunteer

Spring 2015

Contributed to digitize buildings and roads in Indonesia area in Southeast Asia

## **ACCOMPLISHMENTS**

- Awards: 2012 Academic Merit Award and 2010 Outstanding Student Scholarship
- Honors: Excellent performance in academic and physical educations (2010-2011, 2011-2012), commissary in charge of organization in GIS 09 Class (2009 - 2013) and 2010 Excellent organization Work