

# Zhaohui Zach Li

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## EDUCATION

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**The George Washington University, Washington D.C.**

**Aug 2014- Present**

Master of Arts, Geography, Specialization in GIS & Urban Planning

**Related Coursework:** GIS Fundamental | Advanced, Data Mining, GIS Programming, Geospatial Statistics, Database Management Systems, Web-based GIS, Urban Geography, Qualitative Methods, Geography Thoughts & Methods

**Inner Mongolia Agriculture University, Hohhot, P.R. China**

**Aug 2010-Jun 2014**

Bachelor of Engineering in Urban Planning

## SKILLS

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### GIS

- Major GIS skills: GIS Modeling, Cartography, Geospatial Analysis, Geoprocessing.
- GIS Application: Carto DB, Open Street Map, Map Box, and ArcGIS 10.3

### Programming

- Python (Arcpy Panda, Numpy), R, JavaScript (Leaflet, JQuery, D3, AngularJS)

### Web Development

- Bootstrap frame (JavaScript, CSS/HTML5), PHP, WAMP, Geoserver

### Database

- PostgreSQL, MySQL, Cassandra, MongoDB

### Landscape Design Applications

- AutoCAD, Photoshop, Sketch Up, Lumion 3D, and CorelDraw, Illustrator

## PRESENTATION

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Li, Z. & Price, M. (2016): Ghost Cities in China: Urban Sprawl & Urbanism Without People.

Association American of Geographers (AAG). San Francisco CA.

**April 2016**

## RESEARCH EXPERIENCE

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**Globalization Urbanization Migration (GUM) Website Maintained, Washington DC**

**Jan 2016- Present**

- Currently Working for Dr. Marie Price and to collect empirical data at the urban-level to measure immigration in cities around the world and Update data by GWU Drupal.

### **Field Research: H Street car, Washington D.C**

**March 2016- March 2016**

- Collected field data (Photos, videos, interviews materials, and archived photos)
- Drafted the short history of Captain streetcars and visualized timeline of D.C street development
- Investigated current H street utilized condition, safety, as well as observed historic H street around running Street car.
- Predicted D.C Street car development in future.
- Conducted several potential research questions.

## **INTERN EXPERIENCE**

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### **Zhejiang University Urban-Rural Planning &Design Institute, China**

**Jul 2012-Aug 2012**

- Position: Draftsman with paid
- Designed, conducted, and coordinated many draft projects with developing software packages such as AutoCAD, Photoshop, Sketch Up, etc.
- Improved work efficiency by self-developing new techniques in the CAD software

## **PROJECT EXPERIENCE**

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### **Data Mining**

#### **G20 Counties Military & GDP Analysis (2005-2014)**

**Feb2016-March 2016**

- Choose time span from 2005 to 2014 and Collected data from Word Bank Databank
- Applied Python libraries (Numpy &Pandas) to process and manipulate data
- Visualized and analyzed data used matplotlib (Python library) and Poltly (Data Visualization Toolset)

### **Web Development**

#### **A web Application of Geospatial Visualization for Fatal Traffic Crashes in Washington D.C (2004-2013)**

**Oct 2015-Dec 2015**

- Developed the Fatal Traffic Crashes Spatial database with Postages
- Data processing and Geoprocessing with ArcGIS and EXCEL
- Improved User Interface with Bootstrap frame and used the leaflet library of JavaScript achieved dynamic interactive map
- Designed interactive dynamic statistics charts (Pie charts & Line charts) with Google charts

### **Student Career Services for DMV (DC, Maryland, and VA) Area**

**Sep 2015-Dec 2015**

- Developed User Interface with Bootstrap frame
- Designed the E-R diagram and Schema diagram
- Used PHP connected the Database and Front Web pages
- Achieved login, company post position, student search position with SQL and PHP

### **GIS&RS Revenant**

#### **Factors affect the Population distribution in Ordos's city, Inner Mongolia, China**

**Sep 2015-Dec 2015**

- Processed DMSP/OLS Data and Collected Local statistics data in county level (GDP, Population, Farmland area)
- Used Arcpy geoprocessing the collected data and create Python Code that convert DBF format file to CSV format file
- Analyzed the data with spatial autocorrelation function and GWR as well as OLS.etc.

#### **Spatial Distribution of Fatal Traffic Crashes in Washington D.C. (2003-2014)**

**Mar 2015–May 2015**

- Geoprocessing and Geocoding data with toolsets in ArcGIS
- Collected Geospatial data from National Highway Traffic Administration
- Used Describe Statistics functions and Geospatial Statistics functions to analyze the dataset
- Generated several thematic maps and of the study area and drafted a report.

#### **Geographically Visualizing Fine Particle (Pm2.5) Vehicle Emission in Washington D.C**

**Mar 2015–May 2015**

- Improved the Gaussian Line Source Model and make it adjust to the project
- Used Model builder of ArcGIS to populate Euclidean distance between each road segment and the study area
- Used R-Studio to sum all raster data and finalize a single raster layer to represent the study area.
- Generated a Vehicle Emission concentration map and drafted a report.

### **Field Surveying**

#### **Mahan mountain forest farm, Inner Mongolia, P. R. China**

**May 2012– Jul 2012**

- Applied total station to measure and gather the surveying data from the study area of Manhan Mountain
- Measured characteristics of the study area such as surface physical feature, elevation, etc.
- Drafted the survey data with South Cass CAD

### **Landscape Design**

## **Roof Garden Design of College of Forestry of Inner Mongolia Agriculture University, P. R. China**

**Mar 2014 – Jul 2014**

- Used Google Earth to survey the study area and digitize it as the AutoCAD files
- Applied AutoCAD and Photo Shop designs the graph of study area
- Used sketch up modeling study area and rendered it with Lumion 3D

## **AWARDS**

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Best Project Individual award among college-student volunteers in the summer social Practice program to promote rural development in Inner Mongolia Region. Department of Higher Education of the Inner Mongolia Region.

**2011**

Second department Scholarship

**2011**

Third department Scholarship

**2012**