Jialin Li

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EDUCATION

The Ohio State University	08. 2017 - Present
Ph.D. in GIS, Department of Geography	GPA 4 / 4
Dual M.S. in Computer Science, Department of CSE	GPA 3.96 / 4
Central South University, Department of Geomatics	09. 2010 - 05. 2017
B.S. in Geomatics	GPA 88.45 / 100
M.S. in GIS	GPA 3.8 / 4

PROFESSIONAL EXPERIENCE

Spatial and temporal patterns of gas prices in Columbus, Ohio (Research Project) 09. 2017 - 06.2018

- Analyzed densities of high- and low- price gas stations using Kernel Density Estimation, and found the places in Columbus, Ohio with high- and low gas prices in general
- Explored spatial co-location patterns between high and low gas prices by Apriori algorithm in data mining
- Examined whether periodicity exists in the temporal change of spatial co-location patterns

Spatial Regression for the 2016 U.S. President Election (Course Project) 03. 2018 - 04.2018

- Used spatial regression methods (e.g. ordinary least square regression and spatial lag model) to identify the determining factors leading to the outcome of the 2016 U.S. President Election by R programming language
- Found that the most significant factor for the voting pattern is religiosity, and that some socioeconomic and demographic attributes can affect the relationships between voting and religiosity

Modeling the Concentration of Air Pollution (Research Assistant) 06. 2015 - 10.2016

- Completed the missing observation data by a proposed space-time interpolation framework
- Detected relationship between various meteorological and human factors using spatial association mining
- Predicted the Concentration of Air Pollution in Beijing using the commonly used spatial-temporal prediction methods, such as spatial regression, extreme learning machine and multi-layer perceptrons

Optimization of Point Feature Label Placement (Research Project) 06. 2018 - 12.2018

- Proposed an agent-based model for label placement of point features on geographic maps
- Implemented the model in Python and compared with other methods including linear programming

Cartographic Recognition (Research Project) 09. 2018 - Present

- Identified whether a given image is a map, and identified its geographic region and projection, if it is a map using three machine learning methods (i.e., SVM, MLP and CNN)
- Detected map elements (titles and legends) by finetuning generic object detection models such as Faster R-CNN and YOLO models using TensorFlow and PyTorch libraries in Python

SELECTED PUBLICATIONS

Li Jialin et al., A Method of Spatial Interpolation of Air Pollution Concentration Considering Wind Direction and Wind Speed [J]. Journal of Geo-information Science. 2017,19(03):382-389.

Li Jialin et al., Residual Inverse Distance Weighting Spatial Interpolation Method Based on Spatial Heterogeneity Sub-region [J]. Geography and Geo-Information Science, 2015, 31(5):25-29.

Computer Skills

Languages: Main (daily use): Python **Experienced**: MATLAB, C++, C#, JavaScript **Used**: R, Java

Tools: SQL Databases, SPSS, ArcGIS (Desktop, Pro, Online, ArcEngine), TensorFlow, PyTorch, LaTex

SELECTED AWARDS & HONORS

Travel Award in Spatial Analysis and Modeling Session in Annual Meeting of AAG	12.2017
Wuhan Area Code Craft 2016, Team Silver Medal	05.2016
National Scholarship of Chinese Government	09.2013