Ziwen CHEN

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Education

School of Resource and Environmental Science, Wuhan University, Wuhan, China   Sep 2015 - Present
B.S. in Geographical Information Science
➢ **GPA** (overall): 3.9/4.0   **Ranking**: 1%
➢ **Scholarship**: Receive 3 years' Outstanding Students Scholarships (top 3 in class), Liu Daoyu Creativity Scholarship (1/260), International Study Scholarship for Excellent Students (1/260),
➢ **Awards**: Third prize in the 15th National College GIS Competition; National Undergraduate Training Programs for Innovation: Finished with Distinction, Research reported on the International Conference on Geoinformatics and Data Analysis (ICGDA 2018)

Department of Psychology, University of Cambridge   Jul 2018 - Oct 2018
➢ Visiting Research Student, supervised by Dr. *Jason Rentfrow*, Reader in Personality & Individual Differences.

Research Experiences

Social Machine Intelligence for Novel Discovery Project | Research Assistant
(funded by DARPA Ground Truth program)
Supervisor: Dr. *James Evans*, University of Chicago   May 2019 - Present
➢ Generated individual homophily matrix based on geographical distance, site-visiting behaviors and demographic information in a simulated world.
➢ Built machine learning model to predict friendship formation and give prescriptions under certain budget to maximize simulated friendship.

American geography of Machiavellianism | Research Assistant
Supervisor: Dr. *Jason Rentfrow*, University of Cambridge   Jul 2018 – Dec 2018
➢ Cleaned careless response of large-scale cross-sectional survey data of Machiavellianism (N ~ 1.2 million) by analyzing consecutive answers, Mahalanobis distances, and inter-person correlations.
➢ Developed a spatial weight matrix to combine contiguity and distance relations; employed spatial autocorrelation analysis and hotspot analysis to determine the spatial heterogeneity of regional Machiavellianism in US.
➢ Explored the relationship between income inequality, local industry structure and regional Machiavellianism using correlation and regression analysis. Results were reported at the Australian Conference on Personality & Individual Differences (ACPID 2018).

Changes in human value structures across space and lifespan | Research Assistant
Supervisor: Dr. *Jason Rentfrow*, University of Cambridge   Jul 2018 - Dec 2018
➢ Cleaned and geocoded large-scale psychological survey data of Schwartz's basic human values; generated standardized value priority scores and mapped its spatial distribution pattern.
➢ Conducted exploratory and confirmatory factor analysis to test value structures; applied cluster analysis to explore the spatial distribution of value clusters.
➢ Generated spatial and temporal patterns of value priority for different age, gender, ethnic and income groups; uncovered changes in value priorities across space and life span.

Understanding people's response to food insecurity on a social network perspective | Team Leader
(Data for Climate Action Challenge, UN Global Pulse)
Advisor: *Guanghua Chi*, University of California, Berkeley   Apr 2017 - Oct 2017
➢ Investigated the structure and changes of social community using a community detection algorithm on over two billion Call Detail Records in Senegal; processed and analyzed the data with cloud computing.
➢ Designed and created a mathematic model to estimate food supply condition using time-series satellite data, food price, and household survey data.
➢ Discovered the hidden community mergence pattern in food insecure area, which indicates a risk-sharing strategy of Senegal communities to cope with food insecurity.

Skills

➢ **Programming languages: Two years:** C++, Python; **One year:** C, C#, Java, JavaScript, HTML5
➢ **Software: GIS:** ArcGIS, ENVI, GeoDa, Eclipse
        Visualization: CorelDraw, Photoshop, Mapbox
        Statistical Analysis: SPSS, Stata, MATLAB
➢ **Language:** TOEFL 114 (R:30 L:29 S:25 W:30)