Ziwen CHEN

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Education

M.A. in Computational Social Science, University of Chicago, United States Sep 2019 – Present

- **Major GPA**: 3.8
- **Core Courses:** Computational Content Analysis, Network Analysis, Advanced Programming, Deep learning

B.S. in Geographical Information Science, Wuhan University, China Sep 2015 – Jun 2019

- **GPA**: 3.88/4.0 **Ranking**: 2%

Research Interests

Culture, Social Network, Complexed System, Computational Sociology, Urban Informatics

Research Experiences

Social Machine Intelligence for Novel Discovery Project | Research Assistant
(DARPA Ground Truth program)
Supervisor: Dr. *James Evans,* University of Chicago Jun 2019 - Present

- Explored the hidden ground truth of a simulated urban world which has interconnected demography, transportation, social network and epidemiology systems. Generated causal graphs of the social process in the urban systems.
- Completed several prediction tasks related to the future state (i.e., traveling dynamics, site popularity, social interaction) of the simulated world in 30 days using time series analysis.
- Designed an intervention strategy to maximize friendship formation and maintenance for a subset of the population in 30 days based on social network analysis and geographical co-location.

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.
- Created interactive map, employed spatial autocorrelation analysis and hotspot analysis to explore the spatial heterogeneity pattern of regional Machiavellianism in US.
- Unveiled a positive relationship between income inequality, population density and regional Machiavellianism using correlation and regression analysis. Results were reported at the Australian Conference on Personality & Individual Differences (ACPID 2018).

Understanding people's response to food insecurity on a social network perspective | Team Leader
(Data for Climate Action Challenge, UN Global Pulse)
Collaborator: *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 from Orange Company; processed and analyzed the data with on Google Cloud Platform.
- Designed and created a mathematic model to estimate food supply condition using longitudinal satellite image, food price, and household survey data.
- Discovered a risk-sharing strategy of Senegal communities in coping with food crisis by observing the longitudinal dynamics of community merge patterns in food-insecure areas.

Awards & Honors

- Maroon Scholar Research Award ($28,500) 2019
- International Study Scholarship Students ($2,000) 2019
- Best Project in the 12th National Innovation and Entrepreneurship Undergraduate Training Program ($1,500) 2019
- Liu Daoyu Innovation Scholarship ($850) 2018
- Third prize in the 15th National College GIS Competition 2017

Skills

- **Programming languages:** Python (proficient), C (proficient), R, C++, C#, Java
- **Research skills:** Social Network Analysis, Parallel Computing, Data Visualization, Spatial Analysis, Satellite Image Processing
- **Language:** Mandarin Chinese (native), English (TOEFL 114)