Tiansheng Tan

Date of birth: February 27, 1998
Email: tan00279@umn.edu
Phone: 6124039941

Education Background

University of Minnesota-Twin cities, MN ***(Current)***

Program: College of Liberal Arts

Geography Ph.D

Advisor: Kathryn Grace

Specialty: Spatial analysis, statistics, big data, GIScience, population-environment interactions, climate change, environmental dynamics

Boston University, MA

Statistics major GPA:3.85

- **Degree: M.A in Statistics (Concentration in Operations Research)**
- **Core curriculum:**
- Advanced Probability Theory, Mathematical Statistics, Linear Regression Model, Stochastic Process, Operations Research Optimization, Bayesian Statistics, Time Series Models, Computational Statistics, Game Theory

Rutgers University-New Brunswick, NJ

- **Degree: B.A. in Mathematics&Statistics (Double major) &Economics (Minor)**
- **Core curriculum:**
- Real analysis, Linear algebra, Ordinary differential equations, Partial differential equations, Differential geometry, Linear regression methods, Computational mathematics, Mathematical theory probability &statistics, Statistical sampling, Bayesian data analysis, Comput&Graph applied statistics, Data science, Real number analysis, Linear optimization, Graph theory, Advanced calculus, Intermediate microeconomics, Intermediate macroeconomics, Econometrics, Planet Earth, Global Environment, Public policy on urban planning

Research Interests

Spatial data analytics, GIScience, GeoAI, Machine learning, Remote sensing, Network analysis, Transportation systems optimization, Data-driven urban mobility modeling ,Game theory, Stochastic process, Markovian decision process, (Markov-based stochastic modeling), Public health

Research Experience

Shanghai International University Student Symposium

- **Major roles**: Project member; Author
- **Responsibilities:**
- Defined the research methodology as quantitative; Designed and distributed 100+questionaires via the online platform ; Checked information concerning energy consumption structure on the website "ERIC;" Established a data model between carbon emissions and energy use; Conducted analysis of data collected; Drafted the full paper
- **Achievements:** Author of *The Impact of Carbon Emissions on Social Development*; Award for Excellent Internship Experience

Rutgers University Research assistant

- **Major roles:** Member; writer
- **Responsibilities:**
- Project in operational management on the transportation and distribution problem of automobiles. To minimize the total transportation cost and to optimize the distribution of available resources simultaneously. Datasets were obtained and formulated into Operational Research models using the simplex method of linear programming, five transportation algorithms, the Least Cost Method and the Column-Minimum Method.
- **Achievements:** Excellent student paper in university research association

Work experience

JP Morgan Data Analysis Group

- **Major role**: Data analyst assistant
- **Program Content:**
- Learned basic computer science and statistics knowledge; Finished Titanic—the first project on Kaggle and Santander Bank—the second project; Communicated with the mentor to adjust these values; Used the light GBM from tree-based learning algorithm; Won the first place with a scored 0.90082 in the final competition
-

Shanghai Dongfang Hospital

Major role: Part-time research assistant (PTA) in Database Department

- **Program Content:**
- Familiar with the transformation process and data revision from the outpatient department into a statistical model; Calculated sample data and power for multi-level trials; Assisted with a senior analyst to enhance the efficient model by using r-programming; Analyzed samples in order to make inferences about the population

Teaching experience

Lab teaching assistant, *Into to Computational statistics, Statistics II*

Grader, *Graph theory*

TA, *GEOG 1502 - Mapping Our World (Current)*

Honors

Second Prize Scholarship for Outstanding Student

Dean's List

Graduation with college honor

Excellent student paper award in university research association

Other Skills

Languages:

- Chinese (native speaker), English (professional fluency)
- Toefl:109 (30 full score in Writing) ,Strong reading and writing skills

Programming languages:

- R, SAS, Python, Matlab, ArcGIS

Fieldwork:

Worked as a member of Urban Geography Club; Learned to collect first-hand data by observing the dynamic local areas, places and people in the real social environment; Examined the way Geographic theories interact with real life

Qualitative research:

Independent Geography case study about urban changes

Several approaches for data collection **(**Observations/Interviews/Surveys/Secondary research.) Using MAXQDA to conduct qualitative data analysis.

Certificate:

Chinese Accounting qualification certificate (CPA)；

Securities market qualification certificate

Coursera certificates:

- Supply Chain Management;
- Logistics and Transportation;
- Urban geography;
- Game Theory;
- Innovative governance of large urban systems;
- Applications of GIS;
- Geospatial and Environmental Analysis;
- GIS Data Formats, Design and Quality;
- Smart Cities – Management of Smart Urban Infrastructures