

Minnesota Population Center DIVERSITY FELLOWSHIP



UNIVERSITY
OF MINNESOTA
Driven to Discover®

SUMMER 2018 PROJECTS

Be a part of something BIG.

Exploring Spatiotemporal Patterns & Accessibility of Nice Ride in Twin Cities with Professor Somayeh Dodge & Senior Data Analyst Derek Burk

Fellows will work with Dr. Dodge and Mr. Burk to explore patterns of Nice Ride trips from 2010 – 2017. Bike sharing is a means of green transportation and contributes to a healthy lifestyle. An effective bike sharing system should be safe, affordable, and accessible to the community it serves. Fellows working with Dr. Dodge will analyze spatiotemporal patterns of bike sharing trips in the Twin Cities to determine if access to the bike sharing service is equal for neighborhoods of different demographic characteristics. This knowledge is essential for modeling and designing equitable and accessible bike sharing systems. You will explore the following research questions: Are there any regularities in Nice Ride usage in space (spatial patterns) across the Twin Cities and time (season, monthly, weekly, daily patterns)? Are there any associations in Nice Ride usage and the demographic characteristics of the neighborhoods in which Nice Ride operates? Is there any difference in access to Nice Ride in different neighborhoods? Where are underserved or overserved populations and areas? This research will provide important insights into biking patterns of Nice Ride users and spatiotemporal variability and accessibility of Nice Ride service.

Socioeconomic Characteristics of Public Housing Residents in the 1940 Census with Professor Ryan Allen & Spatial Analysis Director Dave Van Riper

Fellows will work with Dr. Allen and Mr. Van Riper to reveal the historical effect of the 1934 public housing policy. Additionally, students will determine the specific socioeconomic characteristics of individuals who benefitted from public housing in the 1940s by comparing addresses of public housing residents to enumerated district data from the 1940 Census. This research will allow us to identify residents of public housing in 18 cities spread across the US at the time of the Census. You will compare the resident characteristics of The Housing Division of the Public Works Administration to those residents in Wagner-Steagall Act. This comparison will allow us to gain insight into how the construction of the specific public housing affected the demographic profile and the socioeconomic status of neighborhoods with newly constructed public housing. You will seek to answer questions regarding the socioeconomic status of households in various public housing units. You will generate descriptive statistics for the public housing residents, the pool of public housing residents, and the neighborhoods around public housing developments. You will also create data visualizations based on the descriptive statistics or other exploratory data analysis.

Security Services & Violence in African Countries with Professor Elizabeth Boyle & Research Scientist Lara Cleveland

Fellows will work with Dr. Boyle and Dr. Cleveland to better understand whether greater professionalization among African police forces is associated with a lower incidence of violence against civilians. You will use data from IPUMS International and the Armed Conflict Location & Event Data (ACLED). You will combine information on police officers including education and employment status to determine professionalization. You will conduct exploratory analysis to determine the best ways to measure these variables. You will link ACLED on violence against civilians to IPUMS International data, based on year and geographic units. You will explore if these data can answer the question of if where racial, ethnic, or religious characteristics of police vary significantly from the people they are policing, the police are more likely to resort to violence.

Measuring Impacts of Heterogeneity on Poverty and Employment Pathways Among Boomers with Professor Phyllis Moen, Research Scientist Dr. Sarah Flood, & Research Scientist Dr. José Pacas

Fellows will work with Dr. Moen, Dr. Flood, and Dr. Pacas to examine relationships between poverty and short-term changes in employment among older adults (ages 50-79). We will consider demographic differences in the poverty-employment relationship over the last decade and relationships between employment patterns and changes in poverty. The focus of this project will be on age- and gender-specific patterns since women and the old tend to experience higher rates of poverty than men and working-age adults. You will use panel data from the Current Population Survey (IPUMS CPS) to construct employment paths. You will code data, link observations over time, and empirically identify employment paths. You will create data visualizations to demonstrate these relationships. You will conduct multivariate analyses to understand relationships between age, gender, poverty, and employment patterns as well as relationships between age, gender, employment patterns, and changes in poverty.