Joshua Gary Mausolf

Address: 1126 East 59th Street, 305
Chicago, IL 60637
Phone: +1 231-667-7017
email: jmausolf@uchicago.edu
website: jmausolf.github.io

Education

2019	Ph.D.	University of Chicago, Department of Sociology
expected		*Special Field Exams*: Survey Research Methods; Inequality in Labor Markets, Wealth, and Social Mobility
2016	M.A.	University of Chicago, Department of Sociology
		Preliminary Exams: Stratification and Inequality, Political Sociology, Economic Sociology, Urban and Race, Sex and Gender, Family
2012	B.A.	New York University, Department of Sociology
		Major: Sociology with High Honors, *summa cum laude*
		Thesis: "Environmental Hookups: School Social Environment and the College Hookup Scene" (Best Thesis, Departmental Honors)
2010	A.A.	Northern Virginia Community College
		Major: Liberal Arts, *summa cum laude*

Professional Experience

2015-Current	University of Chicago, Chicago, IL
	Graduate Research Assistant, Xi Song, *Dept. of Sociology* Graduate Research Assistant, Kathleen Cagney, *Dept. of Sociology* Graduate Research Assistant, Jenny Trinitapoli, *Dept. of Sociology* Junior Data Scientist, James Evans *Knowledge Lab, Computation Institute*
Jun-Aug 2016	Data Science for the Social Good, Chicago, IL
	Data Science Fellow, Predicting Adverse Police Incidents, *White House Police Data Initiative*
2012-2014	New York University, New York, NY
	Research Assistant, Jeff Manza, *Dept. of Sociology* Research Assistant, Patrick Sharkey, *Dept. of Sociology*
2011-2012	Columbia University, New York, NY
	Publishing Assistant: Acquisitions and Subsidiary Rights, *Teachers College*

Research Experience

Current — University of Chicago, Chicago, IL

2016-2017 — Graduate Research Assistant, Xi Song, *Dept. of Sociology*

Developing an R-application for a bivariate-locational scale model, which improves on current methods for examining intergenerational mobility.

2016-2017 — Graduate Research Assistant, Kathleen Cagney, *Dept. of Sociology*

(1) Performing research and analysis for a project examining the causal effect of crime on BMI and blood pressure using the Dallas Heart Study.

(2) Conducting research on the energy consumption and spending of Chicago residents.

2016 — Graduate Research Assistant, Jenny Trinitapoli, *Dept. of Sociology*

Supervising a small team of undergraduate and graduate RA's in cleaning the Tsogolo la Thanzi (TLT) data, a longitudinal study of young people's fertility and reproduction in relation to the AIDS epidemic in Malawi.

2015 — Junior Data Scientist, James Evans *Knowledge Lab, Computation Institute*

Analyzing hypergraph network data using NetworkX in Python, visualizing the network in Gephi, and developing dynamic web graphics with Javasript for a project examining the social networks of academics.

Jun-Aug 2016 — Data Science for the Social Good, Chicago, IL

Data Science Fellow, Predicting Adverse Police Incidents, *White House Police Data Initiative*

Conducting data science research in collaboration with the Metropolitan Nashville Police Department as part of the White House Police Data Initiative to build a generalizable machine learning model to predict police officers at risk of having an adverse incident.

2012-2014 — New York University, New York, NY

Research Assistant, Jeff Manza, *Dept. of Sociology*

(1) Conducting original research and writing for a book chapter on Occupy Wall Street and public opinion. (2) Conducting background research for the presentation, "A Broken Public? Americans' Responses to the Great Recession," presented at Harvard's Kennedy School, April 2012.

Research Assistant, Patrick Sharkey, *Dept. of Sociology*

Coding historical, journalistic, and geophysical data to assist a future project examining the cognitive impact of psychological stressors on youth in Chicago Public Schools.

2011-2012 — Columbia University, New York, NY

Publishing Assistant: Acquisitions and Subsidiary Rights, *Teachers College*

Conference Presentations

2017	Mausolf, Joshua G. "Occupy the Government: Analyzing Presidential and Congressional Response to Disruptive Protest." Presented at the Annual Meeting of the American Sociological Association, *Political Sociology* session, August, Montreal.
	Mausolf, Joshua G. "Occupy the Government: Analyzing Presidential and Congressional Response to Disruptive Protest." Presented at the Annual Meeting of the Population Association of America, *Computational Approaches to Dynamic Social Processes* session, April, Chicago.
	Mausolf, Joshua G. "The Effect of University Prestige on College Sexual Activity." Presented at the Annual Meeting of the Population Association of America, *Sexual Identity, Behavior, and Health* session, April, Chicago.
2016	Joshi, Sumedh, Jonathan Keane, Joshua Mausolf, Lin Taylor, Joe Walsh, Jen Helsby, and Allison Weil. "Predicting Adverse Police Incidents." Presented at the 4th Annual Data Science for Social Good Conference, August 24, Chicago.
	Mausolf, Joshua G. "Occupy the Government: Presidential and Congressional Rhetorical Response to the Occupy Movement." Presented at the 2nd Annual International Conference on Computational Social Science, *Collective Action* session, at the Kellogg School of Management, Northwestern University, June 25, Evanston.
2015	Mausolf, Joshua G. "Sexual Privilege: The Effect of Private and Elite Campuses on the College Hookup Scene." Presented at the Annual Meeting of the American Sociological Association *Hookup Culture*, roundtable, August 22, Chicago
	Mausolf, Joshua G. "Sexual Privilege: The Effect of Private and Elite Campuses on the College Hookup Scene." Presented at the Engendering Change Conference at the University of Chicago, April 11, Chicago

Grants, Awards, and Fellowships

2016-2017	Marshall Field Fellowship in Sociology ($23,000)
Summer 2016	The Eric and Wendy Schmidt Data Science for the Social Good Summer Fellowship ($16,500)
2014-2019	The University of Chicago, Social Science Fellowship ($107,000)

Honors and Distinctions

2010-2012	New York University
	Graduation honors: *summa cum laude*
	Official selection: "Best Honors Thesis" Department of Sociology, nominated for the Phi Beta Kappa – Albert Borgman Prize.
	Founders Day Award
	Dean's List
2008-2010	Northern Virginia Community College
	Graduation honors: *summa cum laude*
	Award of Academic Achievement in Mathematics
	NSCS Special Recognition for "Scholarship, Leadership, and Service"
	Presidential Scholar
	Dean's List

Current Manuscripts in Preparation or Under Review

2017	Mausolf, Joshua G. "Occupy the Government: Analyzing Presidential and Congressional Response to Disruptive Protest." (Under Review)
	Mausolf, Joshua G. "Sexual Privilege: The Effect of University Prestige on College Sexual Activity." (Under Review)
	Mausolf, Joshua G. "Closing the Gender Gap in Executive Compensation? Reviewing the Evidence, 1992-2015" (In Preparation)

Selected Scholarly Papers

2015	Mausolf, Joshua, Bridgit Donnelly, and Christine Cook. "Predicting Dropouts in Montgomery County Public Schools: A Machine Learning Approach to Educational Policy."
2012	Mausolf, Joshua G. "Occupy the Whitehouse: Presidential Politics and the Efficacy of the 99 Percent."
	Mausolf, Joshua G. "Environmental Hookups: School Social Environment and the College Hookup Scene."
	Mausolf, Joshua G. "Spatial Enslavement: Mass Incarceration and the Politics of Disadvantage."
2011	Mausolf, Joshua G. "Ethical Racism and the Obamaian Epoch: Evaluating White Racial Attitudes in a 'Post Racial' Society."

Other Publications and Reviews

2016 — Mausolf, Joshua, G. "The Unintended Consequences of Border Patrol: How U.S. Immigration Policy Backfired." *Chicago Policy Review*, April 15.

Research Proposals

2015 — Mausolf, Joshua G. "Analyzing Presidential Rhetoric and Occupy Wall Street: A Computational Approach."

2014 — Mausolf, Joshua G. "Mapping Network Effects on Self-Perceived Life Chances of College Freshmen."

Statistical and Computational Methods

R/Stata

Statistical Methods

Time-series Models:

Autoregressive Fractionally-Integrated Moving Average (ARFIMA), Autoregressive Moving Average (ARMA), as well as OLS, 2SLS, IV, Poisson, and negative binomial time-series models

Longitudinal Models:

Mixed Effect Models (MRM) with and without auto-correlated errors for linear, binary, categorical, and multinomial data; Covariance Pattern Models (CPM); GEE models; and multi-level models

Maximum Likelihood Estimation:

Logit/Probit, Ordered Logit/Probit, Categorical Data Analysis, Multinomial, Negative Binomial, Poisson, Survival Analysis

Hierarchical Linear Models:

HLM for use with linear, binomial, and categorical nested, longitudinal, or cross-classified data

Linear Regression Models:

Ordinary Least Squares (OLS), 2-Stage Least Squares, Instrumental Variables (IV) Regression, Generalized Least Squares (GLS), and General Linear Models (GLM), Bayesian Linear Regression

Dimensionality Reduction:

Principal Components Analysis (PCA), Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA)

Graphical:

Time-series and regression plots of model predictions versus observations, Margins Plots, Box Plots, Bar Charts, Histograms, Scatter Plots, Line Plots, Lowess/Lfit/Qfit Lines, and combinations of the above to produce clear and compelling visuals of complex data

Other Analyses or Tests:

Bootstrapping, Bagging, Adjusting Analyses for Survey Sampling Weights, ANOVA, MANOVA MANCOVA, One/Two-Sample T-Tests, F-test, Chi2 Test, Cohen's Kappa Test, A/B Testing, Bayesian Information Criterion (BIC), Akaike information criterion (AIC), and Least Log Likelihood, Likelihood Ratio Testing, Cronbach's Alpha, Regression Diagnostics to Assess Proper Model Fit and Specification

Python/R

Computational Methods

Reproducible Research:

Developing a variety of custom Python applications such as machine learning pipelines, web scrapers, text analysis, data cleanup and preprocessing, regular expressions, statistical analysis and graphs, interfacing with other languages (SQL/Linux), and dynamic web development

Machine Learning:

Logistic Regression, Random Forest, Decision Trees, Boosting, Bagging, Gradient Boosting, Linear SVM, K-Nearest Neighbors, K-fold Cross Validation, Temporal Cross Validation

Data Mining and Web Scraping:

Building complex Python and Bash web-scraping packages to navigate static or dynamic pages, pager/index count pages, or dynamic JavaScript pages; parse specified data text or alternate data; and download and organize this data in a custom database, data frame, or file structure

API/JSON Queries:

Utilizing Python API queries: examples: Twitter API, Sunlight Foundation API

SQL

Relational Databases:

Using SQL (MySQL, PostgreSQL, SQL) for data storage and complex queries on remote servers. Experience with database schema design, stored procedures, and ETL process from raw data

HTML/CSS

Web Development:

HTML, CSS, Javascript, to design and customize web pages, developing and embedding dynamic Javascript/XML visual objects, building static webpages with Jeckel and dynamic webpages with Flask using a Python and SQL interface. Using R Shiny Apps and Rmarkdown for webpages.

Bash/Git

Other:

Linux, Mac, and Windows Operating Systems, Shell, SSH protocol, Git, RegEx, Vim, Atom, Sublime

Survey Methods and Research Design

R/Stata

Survey Methods and Design

Survey Weighting:

Calculation of base weights, unit non-response weights, item non-response weights, and post-stratification weights under a variety of survey implementations or combinations of simple random sampling, systematic sampling, PPS-sampling, stratified sampling, cluster-sampling, or multi-stage sampling using some combination thereof

Survey Design and Optimization:

Designing the appropriate type of survey given a fixed budget or variance, desired sample size, expected response rate, and design factor to maximize results

Questionnaire Design:

Design of appropriate survey questions, indexes, and scales that meet cognitive requirements under a variety of implementations such as web (CAWI), phone (CATI), in-person (CAPI), and mail; as well as critically analyzing these questionnaires using pre-testing and cognitive interviewing

Other Research Design Competencies:

Experimental Design, A/B Tests, Focus Groups, Semi-Structured Interviewing, Unstructured Interviewing, Ethnographic Study

Datasets:

General Social Survey (GSS), American Community Survey (ACS), American National Election Survey (ANES), National Longitudinal Survey of Youth 1997 (NSLY97), Project on Human Development in Chicago Neighborhoods (PHDCN), National Immunization Survey (NIS), NORC Presidential Election Study, Online College Student Life Survey (OCSLS), Montgomery County Public Schools Survey, and Lakeside Neighborhood Survey (2015 PAPI), S&P ExecuComp-Compustat

Languages

Languages	English (native), French (proficient), Spanish (elementary)
	Python, R, Stata, SQL, PostgreSQL, MySQL, Linux, Bash, Git, Vim, SSH, Markdown, JSON, HTML, CSS, Javascript, LaTeX
Libraries	Python: Pandas, Numpy, Scikit-learn, SciPy, NLTK, Beautiful Soup, Flask, NetworkX, Matplotlib, Seaborn, Selenium, Tweepy
	R: Tidyverse, ModelR, Caret, Sparklyr, Ggplot, StringR, Rvest, Shiny, Devtools
Other Software	Microsoft Office Suite: Word, PowerPoint, Access, Outlook, Excel Adobe Applications: Acrobat Pro, Adobe Photoshop, Lightroom Google Applications: Slides, Sheets, Documents, Gmail, Drive Project management: SAP, CRM, Trello, Slack Visualization and Analysis: Tableau, Gephi, VosViewer, Atlas.ti Operation Systems: Windows, Apple, and Linux

Teaching

Spring 2017	Teaching Assistant, Machine Learning for Public Policy (principal instructor: Jens Ludwig)
Winter 2017	Teaching Assistant, Computing for the Social Sciences (principal instructor: Benjamin Soltoff)
	Teaching Assistant, Social Science Inquiry II (principal instructor: Xi Song)

Fall 2016	Teaching Assistant, Computing for the Social Sciences (principal instructor: Benjamin Soltoff)
	Teaching Assistant, Social Science Inquiry I (principal instructor: Cheol-Sung Lee)
Spring 2016	Teaching Assistant, Statistical Methods of Research II (principal instructor: Xi Song)
	Teaching Assistant, Principal Components and Factor Analysis (principal instructor: Kathleen Cagney)

Associations

American Sociological Association
Population Association of America
National Society of Collegiate Scholars
Phi Theta Kappa International Honor Society
The University of Chicago Alumni Association
New York University Alumni Association