

Joey Marshall

Data Science | Machine Learning | Data Visualization | Public Communication

✉ +1.903.721.2650 ✉ joeymarshall@live.com ✉ linkedin.com/in/joeymarshall ✉ github.com/marsha5813

SUMMARY

Data scientist and sociologist with 10+ years of experience in applied analytics, machine learning, statistical methodology, and public communication. Media-trained spokesperson and technical leader skilled in translating complex analyses for the public and the media.

EXPERIENCE

Founder | Fractional Lead Data Scientist

Plot Points, LLC

📅 2024 - Present ✉ Remote | Washington, D.C.

- Provide data science consulting services, specializing in machine learning, geospatial analysis, survey analytics, and data visualization
- Develop tailored data solutions for clients, including predictive modeling, demographic analysis, survey research, and custom dashboards
- Train, deploy and maintain machine learning models in production environments in AWS
- Fine-tune, productionize, and deploy LLMs in engineering environments
- Maintain production-scale database, ETL and data pipeline services
- Create geospatial analyses and interactive maps to support clients' operational planning and market analysis
- Build and maintain client relationships through proactive communication, project transparency, and a commitment to understanding and achieving business goals

Data Scientist

U.S. Census Bureau

📅 2020 - Present ✉ Remote | Washington, D.C.

- Developed and maintained Python and R packages for internal and external users
- Led internal workshops and boot camps for learning and using R
- Created and led a new research initiative to analyze driving routes to critical infrastructure in the immediate aftermath of natural disasters
- Deployed as a Census Liaison to FEMA's National Response Coordination Center supporting Hurricanes Idalia (2023), Helene (2024) and Milton (2024)
- Built a probabilistic record linkage engine to support interagency research on U.S. retail health clinics
- Traveled internationally and domestically, including with Director of the Census Bureau, to meet with elected officials, data professionals and members of the public
- Delivered reports and interactive dashboards on topics such as public health, natural disasters, population mobility and economic conditions

Senior Principal, Quantitative Analytics and Data Science

Gartner

📅 2019 - 2020 ✉ Arlington, VA

- Awarded "Rookie of the Year" in Research and Methodology
- Led start-to-finish data collection and analysis for four survey research projects
- Led a multidisciplinary, cross-national team through all aspects of the survey research process including questionnaire design, field collection (in coordination with survey vendors), data analysis and dissemination

Research Associate

Pew Research Center

📅 2017 - 2019 ✉ Washington, D.C.

- Led global demographic analyses and authored public reports
- Represented Pew in radio, podcast, and print interviews to explain complex demographic findings
- Led internal workshops on data visualization and storytelling using Tableau

Research Assistant

Purdue University

📅 2014 - 2017 ✉ West Lafayette, IN

- Editorial Assistant and Editorial Manager for the Review of Religion and Chinese Society (Brill)
- Analyzed geospatial data on religion in China and prepared maps for the Atlas of Religion in China: Social and Geographical Contexts (Brill, 2018)
- Created and distributed the monthly newsletter for Purdue's Center on Religion and Chinese Society
- Produced and hosted a monthly audio interview series with guest scholars to support the newsletter

SKILLS

Technical

Python, R, Machine Learning, Shiny, Git, Linux, SQL, Docker, SAS, LaTeX, Stata, VBA, Power BI, Tableau, Markdown, Geospatial Analysis, High Performance Computing, LLM integration and deployment

Professional

Innovative Problem-Solver, Writing, Public Communication, Project Management, Mentoring

EDUCATION

PhD Sociology

Purdue University

2015 - 2020 West Lafayette, IN

- National Science Foundation Graduate Research Fellow (NSF-GRFP)
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MS Sociology

Purdue University

2013 - 2015 West Lafayette, IN

- Frederick N. Andrews Fellow
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BS Sociology

University of Texas at Tyler

2010 - 2013 Tyler, TX

- Summa Cum Laude
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RECENT PUBLICATIONS

Hurricane Helene's Impact on the Socially Vulnerable in North Carolina

U.S. Census Bureau

Joey Marshall, Chase Sawyer, Heather King, Bethany DeSalvo, Walter Peacock

2024  <https://www.census.gov/library/stories/2024/10/hurricane-helene.html>

Who Commuted on Baltimore's Key Bridge?

U.S. Census Bureau

Joey Marshall, Abraham Cheung, Bethany DeSalvo, Chase Sawyer, Heather King, Isabelle Notter

2024  <https://www.census.gov/library/stories/2024/05/key-bridge-commuters.html>

Income Inequality Linked to Social Vulnerability to Disasters

U.S. Census Bureau

Chase Sawyer and Joey Marshall

2024  <https://www.census.gov/library/stories/2024/02/cre-for-equity.html>

Methodology on Creating the U.S. Linked Retail Health Clinic (LiRHC) Database

U.S. Census Bureau

Alice Zawacki, Joey Marshall, Donald Cherry, Xianghua Yin, and Brian W. Ward

2024  <https://www.census.gov/library/working-papers/2023/adrm/CES-WP-23-10.html>