

Brandon P. Pipher

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Experience

United States Census Bureau

Suitland, MD

Supervisory Mathematical Statistician (GS-1529-13) / Lead Data Scientist

Jul 2021 - Present

- Lead research and methodology design for the 2030 Census Coverage Estimation program, driving data-driven projects that apply advanced statistical and machine learning techniques within the Decennial Statistical Studies Division. Develop tract-level person and housing unit estimation methods, build outlier-detection frameworks, and apply graph-theoretic models to leverage household structures from administrative records for improved population estimates.
- Advance intercensal population estimation through the [Continuous Count Study](#) by integrating Census products, commercial datasets, and government administrative records. Apply innovative statistical methods—including Log-Linear and Latent Class modeling—for imputation, and presented findings at the 2024 Joint Statistical Meetings and the 2024 Federal Committee on Statistical Methodology.
- Developed and implemented statistical programming for the [2020 Post-Enumeration Survey \(PES\)](#), creating an in-mover probability imputation model and applying advanced feature-selection techniques to enhance coverage estimate accuracy.

Nations Lending Corporation

Independence, OH

Quantitative Modeling and Research Analyst

Sep 2020 - Jul 2021

- Partnered with Risk Management, Compliance, and Product teams to create automated reports and dashboards, providing insights on KPIs and OKRs using statistical modeling and data science techniques.
- Delivered high-impact analytical summaries to senior leadership, developing flexible reporting solutions to drive strategic decision-making and monitor performance indicators.
- Designed time series forecasting models leveraging public data to predict quarterly mortgage loan origination volume, optimizing workforce allocation and reducing operational costs.
- Applied Natural Language Processing to analyze mortgage process documentation, uncovering bottlenecks and reducing closing times through machine learning-based workflow improvements.

Education

Kent State University

Kent, OH

Master of Science in Applied Mathematics

Aug 2017 - Dec 2019

- GPA: 3.9
- Thesis: [Comparison of Regression Methods with Non-Convex Penalties](#)

University of Akron

Akron, OH

Bachelor of Science in Mathematics, Minor in Statistics

Aug 2013 - May 2017

- GPA: 3.6
- Graduated *cum laude*

Skills

Programming & Scripting	Python, R, SAS, SQL (Redshift, PostgreSQL, MS SQL Server), Bash
Machine Learning	Supervised & Unsupervised Learning, Natural Language Processing, Neural Networks
Statistical Expertise	GLM, ANOVA, Hypothesis Testing, Multiple Comparisons, Statistical Theory
Networks & Graph Theory	Community Detection, Path & Connectivity Algorithms, Graph Matching
Time Series & Forecasting	ARIMA, ETS, SARIMA, Dynamic Regression
Data Visualization	Dash, Shiny, PowerBI, Tableau, Quarto, Geopandas
Tech Stack	VS Code, Git, AWS (S3, EC2, EMR, SageMaker)