Brandon P. **Pipher**

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Experience

United States Census Bureau
Suitland, MD

Supervisory Mathematical Statistician (GS-1529-13) / Data Scientist
Jul 2021 - Present

- Conducted research and methodology design for the 2030 Census Coverage Estimation program. Led data-driven projects within the Decennial Statistical Studies Division that applied statistical and machine learning techniques to evaluate and improve the quality and operational efficiency of the decennial census.
- Developed small-area population and living quarters estimation methods, leveraging state-of-the-art models with population-level administrative records data instead of sampling, projecting up to $53.5M in cost savings through reductions in 2030 survey operations.
- Advanced mid-decade population estimation through the Continuous Count Study by integrating Census, commercial, and other government datasets. Presented findings at the 2024 American Statistical Association Joint Statistical Meeting and the 2024 Federal Committee on Statistical Methodology.
- Designed and implemented an NLP-driven framework using Common Crawl to trace Census data usage across domains and forecast the data needs of grant writers on grants.gov, combining web-scale text mining with stakeholder personas to deliver accessible statistical insights to non-technical stakeholders.
- Developed AI-driven models for the 2020 Post-Enumeration Survey (PES), creating large-scale feature selection pipelines that reduced national net error estimates to -0.24%.

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 reporting 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 internal 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 on regression methods with non-convex penalties and modeling with high-dimensional data.

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 Python, R, SAS, SQL, Bash
Tools Redshift, PostgreSQL. AWS (S3, EC2, EMR, SageMaker), Git, PowerBI, VS Code