

Brian Coy

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PROFESSIONAL SUMMARY

Data Scientist and Analytics Professional with graduate training in Machine Learning and Bayesian Statistics. Expert at architecting ETL pipelines and developing predictive models that drive measurable business ROI, including a 64% reduction in support volume and a 99% reduction in manual processing.

TECHNICAL SKILLS

- **Modeling & Inference:** Bayesian GLM, Random Forests, SVM, Neural Networks, MCMC, Gibbs Sampling.
- **Data Engineering:** Python (Pandas, NumPy, Scikit-learn, PyMC), R, SQL, PowerShell, ETL Architecture.
- **Tools:** Tableau, Git, SQL Server, SQLite, Jupyter, LaTeX.

PROJECTS & RESEARCH

Chess Fair-Play Analysis | *Data Engineering & ML*

- Architected a Python ETL pipeline to ingest 12.2 million game records into a local SQLite database.
- Evaluated K-Means, One-Class SVM, and Random Forest models to detect cheating patterns.
- Conducted error analysis revealing that move-level sequential analysis is required for robust anomaly detection.

Bayesian Hierarchical Modeling | *Graduate Research*

- Developed Bayesian Generalized Linear Models (GLM) using PyMC to analyze state-level maternal health disparities.

TECHNICAL EXPERIENCE

ProMAX Systems | *Support Engineer II* Aug 2022 – Oct 2025

- Identified failure patterns across 120+ incidents via EDA, contributing to a 64% reduction in open tickets.
- Developed PowerShell automation for remote deployments, eliminating 3–6 days of system downtime.

Kentucky Farmworker Programs | *MIS Specialist* June 2021 – April 2022

- Engineered SQL pipelines that reduced paper usage by 99% and client processing time by 5 days.

EDUCATION AND CERTIFICATIONS

Georgia Institute of Technology | M.S. Analytics (Computational Track) Expected Dec 2026

Western Kentucky University | B.A. Mathematics (Writing Minor) 2015

Coursera | Google Data Analytics Certificate 2022