

# Brian Coy

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Bowling Green, KY — [github.com/briancoy](https://github.com/briancoy)

## PROFESSIONAL SUMMARY

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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

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- **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

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### 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

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### 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

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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