WILL SHELLEY

Senior Data Science & Analytics Leader

🔖 EXECUTIVE SUMMARY

Analytics leader with 12+ years directing revenue growth through customer insights, econometric modeling, and AI solutions. Builds high-performing teams delivering measurable business impact via machine learning and strategic segmentation. Proven ability to lead complex analytics initiatives while maintaining hands-on expertise in forecasting, causal inference, and pricing optimization across enterprise-scale operations.

🎓 EDUCATION

2016

The University of Georgia
Master of Science, Applied Economics (MS)   📍 Athens, GA

Thesis: Understanding Household Food Waste: A Rational Inefficiency Approach

2013

Georgia Southwestern State University
Bachelor of Science, Business Administration in Management (BBA)
📍 Americus, GA

💼 PROFESSIONAL EXPERIENCE

Present | 2023

Director of Analytics – Corporate Strategy
Unum Group   📍 Chattanooga, TN

- Voluntary Benefits Elasticity Modeling: Directed initiative modeling consumer propensity to purchase voluntary benefit insurance using price elasticity analysis, enabling pricing optimization that increased product uptake by **18%** across target segments.
- AI-Powered Internal Intelligence: Deployed Large Language Models for analyzing customer service transcripts and internal documentation, implementing governance frameworks ensuring regulatory compliance while enabling cross-team collaboration, reducing help desk calls by **30%** and generating **$590K OpEx savings**.
- Analytics Platform & Team Development: Established enterprise data science center of excellence, built analytics capability through structured learning programs, and implemented version control standards serving cross-functional teams.
- Enterprise Broker Analytics Leadership: Led broker segmentation transformation using advanced models incorporating MSA data, Census demographics, and economic indicators across 15 regional markets, achieving **22% retention improvement** and **$2.1M incremental revenue**.

CONTACT INFO

✉ willshelley404@gmail.com
⭘ github.com/willshelley
🌐 connect.posit.cloud/willshelley/
📞 770-601-9652
📍 Chattanooga, TN, US

CORE COMPETENCIES

- **Customer Analytics**: Geographic Segmentation, Consumer Behavior Analysis, Journey Optimization

- **Advanced Analytics**: Econometric Modeling, Time Series Forecasting, LLM Implementation, Causal Inference

- **Pricing & Revenue**: Dynamic Pricing, Price Elasticity, Revenue Impact Analysis

- **Leadership**: Team Building, Executive Communication, Stakeholder Management

- **Technical Platforms**: Python, R, SAS, Stata, SQL, BigQuery, Snowflake, GCP, Tableau, PowerBI

2023 | 2022

Senior Manager II – Consumer & Market Analytics
Walmart Inc.   📍 Bentonville, AR

- Geographic Revenue Analytics: Deployed XGBoost and econometric models analyzing consumer shopping patterns across 4,000+ stores using demographic clustering and geographic data to optimize apparel assortment, improving inventory turns by **12%** through precision demand forecasting.
- Customer Segmentation at Scale: Developed enterprise clustering application combining purchase behavior and geographic characteristics to automate store-level assortment recommendations, **saving 80+ analyst hours monthly** and reducing stockouts by **15%**.
- Consumer Journey Optimization: Established behavioral cohort analysis framework integrating Amplitude engagement metrics with FullStory web sessions, enabling merchandising optimizations that increased conversion rates by **18%** in target demographics.
- Dynamic Pricing & Promotional Analytics: Built econometric models incorporating regional economic indicators and competitor pricing data to enable dynamic pricing strategies, improving gross margin by **2.3%** while maintaining market competitiveness.
- Cloud Infrastructure & Optimization: Architected automated data pipeline using GCP and BigQuery processing 50M+ customer transactions daily, reducing manual data preparation by **50%** and achieving **$1M annual cost savings**.

2022 | 2019

Applied Economist and Demand Analytics Manager
Shaw Industries Inc.   📍 Dalton, GA

- Demand Forecasting with Economic Integration: Modernized forecasting models integrating housing market data, construction permits, and Census demographic trends using advanced anomaly detection algorithms, achieving **$24M inventory optimization** through 35% improvement in demand prediction accuracy.
- Customer Preference Analytics: Designed decision tree and clustering models analyzing out-of-stock scenarios by MSA and household income segments, developing recommendation engine with **84% acceptance rate** for alternative product suggestions.
- Geographic Market Intelligence: Led comprehensive analysis of flooring demand patterns across 180+ MSAs, incorporating income demographics and local economic conditions to optimize regional inventory allocation and reduce stockouts by **28%**.
- Data Engineering & Demographic Enrichment: Implemented dbt framework transforming raw customer transaction data into analytics-ready tables in Snowflake, standardizing geographic and demographic enrichment processes, reducing analysis preparation time by **35%**.
- Cross-functional Analytics Leadership: Built and managed team of 6 data scientists specializing in customer behavior analysis, established best practices for econometric modeling and customer segmentation.

2019 | 2016

Decision Support Analyst
McKee Foods Corporation   📍 Collegedale, TN

- Predictive Customer Modeling: Led team building econometric models predicting customer purchase behavior across regional markets, incorporating demographic and economic variables to optimize product placement and promotional strategies.
- Executive Analytics Infrastructure: Designed interactive Power BI dashboards integrating customer transaction data with Workday demographic information, providing C-suite real-time insights into customer segment performance.
- Data Pipeline Architecture: Implemented ETL processes in Alteryx automating customer data aggregation from multiple sources, ensuring data quality and enabling consistent demographic and geographic enrichment.
- Self-Service Analytics: Administered Tableau Server deployment enabling business users to conduct independent customer analysis, fostering data-driven culture and reducing ad-hoc reporting requests by **40%**.

2016 | 2014

Graduate Research Assistant
College of Agricultural and Environmental Sciences, The University of Georgia   📍 Athens, GA

- Econometric Research: Conducted large-scale consumer behavior studies using advanced statistical methods, analyzing relationships between geographic factors, demographic variables, and purchasing decisions for agricultural commodities.
- Causal Analysis: Developed econometric models evaluating policy impacts on consumer behavior patterns, utilizing instrumental variables and regression discontinuity designs to establish causal relationships.