Briana Cervantes

website: https://bri-ne.github.io/ | email: cervantes.blc@gmail.com | tel: (504) 810-7771

Data Scientist and Senior Analyst with 4+ years of experience applying statistical modeling, machine learning, predictive analytics, and geospatial methods to complex real-world datasets. Master's degree in Urban Spatial Analytics from the University of Pennsylvania. Experienced in model development and validation, experimental design, risk modeling, Python, SQL, and translating ambiguous business questions into actionable quantitative solutions for technical and executive stakeholders.

Technical Skills

Communication & Leadership

- Executive Presentations
- Data Storytelling
- Client Management
- Cross-Functional Collaboration
- Public Speaking
- Facilitation
- Technical Documentation

Programming

- Python
- SQL
- R
- JavaScript
- Git
- GitHub

Machine Learning & Statistics

- Regression
- Classification
- Random Forest
- XGBoost
- Neural Networks
- NLP
- Sentiment Analysis
- Cross Validation
- Hypothesis Testing

Selected Data Science Projects

- **Housing Price Prediction & Spatial Error Analysis:** Developed an OLS regression model using demographic, environmental, and geospatial features. Performed train/test validation, 100-fold cross validation, MAE/MAPE evaluation, and Moran's I spatial diagnostics.
- **Customer Churn Prediction:** Developed and validated classification models using ROC analysis, confusion matrices, threshold optimization, and chi-square testing to evaluate predictive performance and classification effectiveness.
- **NLP, Sentiment Analysis & Bot Detection:** Developed NLP pipelines using TF-IDF, topic modeling, sentiment analysis, and logistic classification with TextBlob, Gensim, and scikit-learn.
- **Fire Risk Modeling:** Built geospatial risk prediction models using environmental and spatial variables to support quantitative risk assessment and predictive analysis.

Professional Experience

Truveris | Senior Analyst

October 2022 – Present

- **Senior Analyst,** January 2026 – Present; **Analyst II**, 2024 – 2025; **Analyst I,** October 2022 – 2024
- Analyze large-scale healthcare datasets using Python and SQL to identify trends, evaluate business performance, define KPIs, and support strategic decision-making for enterprise clients.
- Inform business strategies for clients representing more than $9M in revenue through quantitative analysis and actionable recommendations.

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- Model Validation
- Experimental Design

Libraries

- Pandas
- NumPy
- scikit-learn
- statsmodels
- GeoPandas
- Gensim
- TextBlob

Geospatial Analytics

- PostGIS
- Spatial Statistics
- Spatial Regression
- Remote Sensing
- Raster Analytics

Education

University of Pennsylvania | Master of Urban Spatial Analytics - *May 2022*

Relevant Coursework: Geospatial Statistics, Machine Learning, Data Mining, Model Validation, Experimental Design, Advanced Statistical Analysis

Suffolk University | Bachelor of Science, Environmental Studies - *May 2016*

Relevant Coursework: Statistics, Policy Analysis, Data Collection and Research, Government and Political Science

- Design and execute data validation, quality assurance, and root-cause analyses to ensure reliability of production reporting and analytical outputs.
- Identified and helped implement a critical enhancement supporting one of three core pillars of enterprise ETL processing.
- Increased analytical team capacity through automation, reusable Python- and SQL-based assets, query libraries, technical documentation, and mentorship of six analysts.
- Translate ambiguous business questions into structured analytical frameworks and actionable recommendations for executive and client stakeholders.

Guilford County Emergency Services | Data Analytics Practicum

January 2022 – June 2022

- Developed predictive and statistical models in R and maintained reproducible code bases for use by public-sector partners.
- Investigated and triaged complex data and operational challenges to develop practical, data-driven solutions.
- Built robust ETL processes to automate data collection, analysis, and visualization workflows.
- Developed a JavaScript-based dashboard to support operational reporting and decision-making for emergency services leadership.
- Conducted data validation and quality assurance activities to improve reliability and usability of analytical outputs.