**IRMA MODZGVRISHVILI**

**Data Scientist | Machine Learning | NLP | SQL | Tableau | AWS | Python | Data Visualization | Deep Learning**

[**modzgvrishviliirma@gmail.com**](mailto:modzgvrishviliirma@gmail.com)**● (347) 641-1970**

**SKILLS**

● **Programming Languages:** Python, SQL (PostgreSQL, MySQL), Python Libraries (numpy, pandas, scikit-learn,

streamlit, matplotlib, Pytorch, Seaborn, ONNX, Sqlalchemy), Javascript, HTML, CSS

● **Machine Learning (ML):** Linear and Logistic Regression, Random Forests, PCA, Gradient Boosting, K-means, Deep

Learning, NLP (nltk, SpaCy, Word2Vec, GloVe, TF-IDF), Times Series Forecasting (Facebook Prophet, SARIMA models), PyTorch, TensorFlow 2.0, HuggingFace, PyCaret

● **Data:** Data Visualization (Tableau, AWS QuickSight, Vizro, Atoti), Processing Large Data Sets, A/B testing, Experimentation, Distributed Computing

(PySpark), Product Analytics

● **Cloud Computing:** Amazon Web Services (AWS), EMR, EC2, S3, SageMaker, AWS Glue, BigQuery,

Docker, Docker Compose, Git, Model Orchestration (Mage AI)

**PROFESSIONAL EXPERIENCE**

**Data Scientist,** TBC BANK February 2022 - Current

Tbilisi, Georgia

* Created a customer propensity scoring model utilizing (ML) gradient boosting (xgboost) to identify critical site features, which was then leveraged by the digital team to enhance the website and improve conversion rates
* Combined SQL and Tableau for ad hoc data analysis of payment methods visualized in a dashboard that delivered data driven insights which were leveraged by the digital marketing team on a daily basis
* Utilized Pytorch and product data to train a neural network to produce product embeddings, which were leveraged for a recommendation system on website product pages - increasing page views for the recommended products by ~2-6%
* Leveraged an artificial neural network in statistical modeling of repeat purchase behavior which accurately predicted second purchases with a 97% test accuracy rate, enabling the organization to improve customer retention by ~4%

**System Analyst,** TBC BANK May 2018 - February 2022

Tbilisi, Georgia

* Upgraded SDLC by implementing Agile methodology, reducing software development time by 30% and reducing customer-reported bugs by 25% over 9 months
* Orchestrated successful data migrations and optimized processes, securing $1 million in vendor discounts within 4 months
* Created and developed predictive models using statistical analysis and SQL to forecast sales and revenue; improved forecasting accuracy by 20% over 1 months and helped the company make data-driven sales decisions
* Engineered automated solutions for 10+ manual processes and automated 10+ processes, reducing manual errors by 50% and saving 40+ hours of work per week for the business operation team

**Data Analyst,** TBC BANK December 2014 - May 2018

Tbilisi, Georgia

* Built a real-time data and reporting system using SQL, Tableau, Access, and Excel, reducing report time by 25% and enabling data-driven decisions by senior management, leading to a 20% revenue increase.
* Formulated machine learning models to forecast customer demand and optimized inventory management, achieved an outstanding 60% reduction in inventory shortages, leading to a remarkable increase in revenue by $500K within a 6-month period.
* Deployed new tools, ETL, and middleware, while improving customer value-based pricing by 13% through a long-term experiment

**EDUCATION** **and CERTIFICATIONS**

**Master of Mathematics, Computer Science and Mathematics,****GPA: 3.9,** Ivane Javakhishvili Tbilisi State University, Tbilisi, Georgia

**Bachelor of Mathematics, Computer Science and Mathematics,****GPA: 3.9***,* Ivane Javakhishvili Tbilisi State University, Tbilisi, Georgia

**Columbia Engineering Boot Camps**, New York, NY November 2023 - Current

* *AI*

**Certified AWS** *practitioner,* Per Scolas, New York, NY September 2022

* *S3, EC2, Redshift, Glue, QuickSight, Lambda, SageMaker*