Jeremy Kauwe

SENIOR DATA SCIENTIST, QUANTITATIVE MODELER

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Experience

Columbia Bank — Senior Data Scientist, AVP (promoted from Junior Data Scientist) **January 2020–Present**

- **~$300K** annual cost savings: Led development of internal CECL replacement models using Trepp CRE data and Moody's macro forecasts, replacing vendor frameworks while supporting forecasting, stress testing, and SR 11-7 compliance.
- **~$200K** annual vendor cost reduction: Redeveloped enterprise deposit beta models using time-series analysis, improving interest-rate pricing sensitivity and NII forecast stability across rate scenarios.
- **~30%** reduction in overnight funding reliance: Built Bayesian liquidity forecasting models, including daily cash calendar forecasts, enabling earlier funding at lower rates and reducing interest expense.
- **~10**% increase in loan approvals: Developed an interpretable decision-tree underwriting model to automate small-business lending and evaluate relaxed approval thresholds, with no observable increase in post-implementation defaults or delinquencies.
- **~5%** reduction in cloud computing costs: Built a macroeconomic stress-testing framework to isolate independent macro risk factors, reducing variable space by ~90% and eliminating non-viable model permutations.
- Improved CECL calibration efficiency: Designed factorial experiments to optimize multipliers for time-intensive Moody's CECL model runs, calibrating vendor models to bank-specific behavior under SR 11-7.
- Improved hedge ratio accuracy: Developed prepayment (pipeline fallout) models for rate-locked loans, reducing interest-rate risk from borrower prepayment between rate lock and loan funding.
- Bank-wide coverage across 70+ models: Designed and implemented standardized benchmarking and backtesting frameworks across internal and vendor models, supporting ongoing performance monitoring and SR 11-7 regulatory review.

DataZenith Analytics — Founder & Principal Data Scientist **June 2025-Present**

- Conducted an independent quantitative audit of a statewide wildfire risk classification model, applying geospatial analysis to evaluate classification logic and thresholds and identify structural weaknesses that prevented downstream adoption.

Independent Quantitative Research — Statistical Arbitrage **November 2017-November 2020**

- Designed and deployed an automated quantitative trading system using statistical modeling, machine learning, and time-series forecasting, achieving a Sharpe ratio of ~2.5 with ~2% maximum drawdown and ~90% win rate through disciplined risk controls.

Operations & Team Lead | Infantry / Sniper Platoon **2004–2013**

- Led cross-functional teams in high-stakes operational environments, overseeing mission planning, security operations, and training initiatives for organizations ranging from small teams to 300+ personnel, while coordinating with external partners to ensure operational readiness and risk mitigation

Education

Portland State University – MS Graduate Coursework in Statistics **2016–2019**

- Completed MS-level graduate coursework in statistics, econometrics, Bayesian statistics, time series analysis, machine learning, advanced econometrics, design of experiments, and computer programming
- Completed select PhD-level coursework in mathematical statistics, deep learning, and kernel methods (e.g., support vector machines)

Southern Oregon University – Bachelor of Arts in Economics **2013–2015**

- Focus on macroeconomic and microeconomic theory, quantitative analysis, econometrics, and applied statistical methods

Skills

Languages	Python, R, SQL, pySpark
Frameworks and Libraries	pandas, NumPy, scikit-learn, statsmodels, PyTorch, matplotlib, urca, GeoPandas
Computing and Software	VS Code, Databricks, Snowflake, GitHub, QGIS
Competencies	Machine Learning, Backend & Full-Stack Engineering (Flask, APIs, Database-Backed Applications, Deployment), Econometrics, Time Series Analysis, Design of Experiments (DoE), A/B Testing, Optimization, Statistical Modeling, CECL Modeling, Stress Testing, Quantitative Forecasting, Risk Analytics, Model Validation, Large-Scale Data Analysis, Cloud Computing, Data Visualization