Jhalyl Mason

jhalyl.mason@colorado.edu | linkedin.com/in/jhalyl-mason | github.com/jhalylm

EDUCATION

University of Colorado Boulder — Boulder, CO
Master of Science in Computer Science — *August 2024 – May 2026*

GPA : 3.9/4.0

Relevant Coursework: Data Mining, Machine Learning, Probability Theory, Statistical Inference, Calculus, Linear Algebra

TECHNICAL SKILLS

Languages: Python, SQL (Postgres), R
Technologies & Algorithms: Predictive Modeling (Neural Networks, Regression), Natural Language Processing (NLP), Time Series Analysis
Data Analysis & Visualization: Pandas, NumPy, Matplotlib, Seaborn, Tableau, RStudio
Other Tools: Jupyter Notebook, A/B Testing, MS Office Suite, Google Colab

EXPERIENCE

Independent Writer — *April 2024 – Present*
Medium

- Researched and authored articles on **machine learning, data science, and quantitative finance**, covering both theoretical concepts and real-world applications.
- Explained foundational ML techniques such as **linear regression, neural network architectures, and time series analysis** in an accessible manner.
- Communicated complex mathematical and statistical concepts related to **probability, stochastic processes, and optimization** for a technical audience.

Technical Customer Service Advisor — *November 2022 – August 2023*
Conduent — *Remote*

- Provided comprehensive IT support to over 100 users daily, troubleshooting software, hardware, and networking issues, and ensuring over 90% customer satisfaction.
- Collaborated with cross-functional teams to develop and implement solutions, strengthening problem-solving and communication skills by delivering clear, technical solutions to non-technical users.

PROJECTS

LSTM Portfolio Optimization | *Yfinance, Pandas, Scikit-Learn, Plotly, SciPy*

- Utilized historical stock data with LSTM neural networks for time series prediction.
- Evaluated model performance using RMSE, MAE, and MAPE.
- Achieved a 47.95% expected annual return and a Sharpe ratio of 1.48 using a 6-month moving average strategy.

Machine Learning Options Pricing | *Yfinance, NumPy, Pandas, SciPy, Matplotlib, Scikit-Learn*

- Implemented a Random Forest Regressor to forecast call and put option prices.
- Achieved superior performance in pricing accuracy compared to Black-Scholes formula using metrics such as MSE, MAPE, AAPE, and PEX.
- Visualized model predictions and analyzed feature importance, identifying key drivers of pricing accuracy and providing insights into areas where machine learning outperforms traditional methods.

E-commerce Anomaly Detection Model | *Scikit-Learn, Pandas, NumPy, Matplotlib, XGBoost*

- Built a fraud detection model with 95.5% accuracy and 0.96 precision using XGBoost.
- Processed 1.4 million transaction records using Pandas to build a scalable solution suitable for large datasets.
- Enhanced model performance via hyperparameter tuning with Optuna.

CERTIFICATIONS

Machine Learning Specialization, Stanford University
Mathematics for Machine Learning & Data Science Specialization, DeepLearning.Ai
Digital Marketing & E-Commerce Professional Certificate, Google