

Grace Holloway

Quantitative Engineer

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SUMMARY

Quantitative engineer with 3 years building pricing and risk tools at an investment technology firm, after a year of energy analytics. Codes in Python, R and MATLAB, applies numerical methods and Monte Carlo simulation, and has shipped 6 models used by clients with \$12B in assets. Documents every model so clients can audit it.

EDUCATION

Master of Science

05/2023

The University of Texas at Austin
Operations Research

Austin, TX

EXPERIENCE

Quantitative Engineer

06/2023 - Present

Hill Country Investment Technologies

Austin, TX

Investment analytics firm serving pension and endowment clients with \$12B in assets.

- Develop 6 pricing and risk models in Python, from bond analytics to private asset valuation.
- Rebuilt a MATLAB Monte Carlo simulation in Python, cutting its runtime from 40 minutes to 3.
- Design SQL data pipelines on AWS that load 2 million daily price records with automated checks.
- Validate model output against R reference code and document assumptions for 30 client reviews a year.

Engineering Analyst

06/2021 - 07/2022

Lone Star Energy Analytics

Houston, TX

Analytics group forecasting power and gas prices for utility clients.

- Forecasted hourly power demand for 3 Texas zones in R, lowering mean forecast error from 7% to 4.5%.
- Built MATLAB optimization models that set injection plans for 12 gas storage contracts.
- Automated weekly client reports in Python for 20 utilities, saving 10 analyst hours a week with sharp analytical skills.
- Created a numerical methods library in Python for spline fitting of 30 forward price curves.

SKILLS

Python • R • MATLAB • Numerical Methods • Monte Carlo Simulation • Optimization • SQL • AWS

Data Pipelines • Analytical Skills

CERTIFICATES

AWS Certified Developer - Associate

Amazon Web Services

03/2025