Jerrod Estell, FRM

614.809.4426 • jrodmath1@gmail.com • Moses Lake, WA 98837

SOFTWARE ENGINEER ⇒ QUANTITATIVE ANALYST ⇒ TECHNOLOGIST

Results-driven technologist bridging quantitative finance and software engineering, delivering automated risk solutions that drive strategic decision-making.

A 2+ Year Track Record in Software Development & Quantitative Modeling

- *Qualified Software Engineer & Quantitative Modeler* with expertise in developing risk analysis applications, algorithm design, and advanced modeling.
- *Proficient in modern software engineering practices*, including object-oriented design, databases, distributed systems, and cloud architecture.
- *Recognized for technical expertise and business acumen* with a Master of Science in Software Engineering (STEM), Master of Science in Financial Economics (STEM), and a Bachelor of Arts in Mathematics.
- *Natural problem solver with strong interpersonal skills* equipped to bridge software engineering and enterprise risk management.

Work Experience

QUANTITATIVE RISK ANALYST 6/2022 to present
PUBLIC UTILITY DISTRICT OF GRANT COUNTY (EPHRATA, WA)

Lead developer and analyst for Quantitative Risk Analytics, combining software engineering and financial risk management. Design and implement automated risk management systems while managing energy portfolio construction and hedging strategies. Enhance risk reporting through custom software solutions. Collaborate with stakeholders to assess and improve company risk profile.

KEY CONTRIBUTIONS & METHODOLOGY:

- ✓ Architected and developed automated credit risk and portfolio reporting system using MATLAB, reducing processing time by 80% and eliminating manual errors.
- ✓ Implemented object-oriented design patterns to create maintainable, scalable risk analysis applications.
- ✓ Developed stochastic calculus models using modern software engineering principles for mean-reverting Brownian Motion analysis.
- ✓ Created a mean-reverting Brownian Motion model using classic stochastic calculus.
- ✓ Created and implemented comprehensive Value-at-Risk (VaR) and Expected Shortfall analysis suite, combining Python automation with financial expertise to enhance portfolio risk management.
- ✓ Led cross-functional teams in developing and deploying risk management solutions.
- ✓ Climate Commitment Act (CCA) Cap-and-Invest emissions accounting and consignment administration.
- ✓ Displayed a strong collaborative mindset, proven leadership skills, and a demonstrated ability to hold influence in a matrix environment despite stressors and challenges.
- ✓ Established effective communication channels across all organizational levels, successfully presenting complex technical concepts to senior management and executives.

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Academic Qualifications & Training

WASHINGTON STATE UNIVERSITY

MASTER OF SOFTWARE ENGINEERING (STEM)

expected (*5/2025*)

◈ **Advanced Coursework**: Large-Scale Data Processing • Distributed Systems Architecture • Software Development Lifecycle • Quality Engineering

OHIO UNIVERSITY

MASTER OF FINANCIAL ECONOMICS (STEM) – ECONOMETRICS & QUANTITATIVE FINANCE (*12/2020*) **GPA:** 3.7

OTTERBEIN UNIVERSITY

BACHELOR OF ARTS – MATHEMATICS (12/*2019*)

GPA: 3.5 | MINORS IN FINANCE AND BUSINESS MANAGEMENT

CERTIFICATIONS & PROFESSIONAL ORGANIZATIONS

CERTIFIED FINANCIAL RISK MANAGER (FRM) - 07/24

AMAZON WEB SERVICES CERTIFIED DATA ANALYTICS - SPECIALTY 04/22 – 04/25

AMAZON WEB SERVICES CERTIFIED MACHINE LEARNING - SPECIALTY 12/21 – 12/24

Technical Competencies

Programming & Development

✓ Languages: C++, Python, MATLAB

✓ Paradigms: Object-Oriented, Functional Programming

✓ Tools: Git, UML, SQL, CI/CD Pipeline

Areas of Key Expertise

Software Engineering

- System Architecture
- Software Testing
- Cloud Infrastructure
- DevOps Practices

Data & Analytics

- Machine Learning
- Big Data Processing
- Statistical Modeling
- Quantitative Finance

Risk Management

- Market Risk
- Credit Risk
- Portfolio Analysis
- Derivatives & Hedging