

# LINYI (LINCOLN) GUO

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## SUMMARY

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- Results-driven Software Engineer and Quant Developer with 4+ years of experience building scalable data systems and production-grade applications for trading and risk management.
- Proven expertise in Python, SQL, distributed systems, and cloud platforms (AWS), delivering over 50% efficiency gains through automation, latency reduction, and system optimization.
- M.Sc. in Statistics & FRM-certified, blending analytical rigor with engineering to solve data-intensive problems.
- Passionate about new era fintech infra and applying ML/AI to create next-gen trading and risk solutions.

## WORK EXPERIENCE

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*Software Engineer, GBME, Scotiabank - Toronto, ON*

*2024.02 - Current*

- Designed and implemented end-to-end data pipelines, streamlining daily trading and production activities
  - Initiated and integrated Redis caching, significantly reducing latency to 1 ms and boosting system performance
  - Exploring Kafka streaming pipelines to enhance data consumption efficiency for high-frequency FI e-trading
- Spearheaded automation of reporting and repetitive tasks (data retrieval, validation and analytics) and productionized workflows, eliminating 100% manual workload and removing key sources of operational risk
- Led Python infrastructure (AWS) upgrade and back-end code/package releases, saving cost at 16%
- Fostered strong partnerships with front/middle office teams and market data vendors for seamless data delivery

*Risk Quantitative Developer, GRM, Scotiabank - Toronto, ON*

*2021.11 - 2024.02*

- Facilitated CCR ETL pipelines and drove risk model development, reducing manual workload by 30% – 50%
  - Designed and optimized new regulatory FRTB CCR models, improving exposure management for over 3bn CAD
- Headed and developed a maintainable Python-based stress testing framework under extensive scenario testing
- Directed month-end CCR data release and delivered interactive dashboards for risk metric analysis and monitoring
- Initiated automation initiatives with machine learning to improve data validation and daily monitoring workflows
- Collaborated with cross-functional teams to align technical solutions with business and regulatory needs

*Statistical Programmer, Everest Clinical Research - Toronto, ON*

*2021.05 - 2021.10*

- Designed and developed statistical reporting pipelines to generate validated clinical trial TLGs
- Built and optimized data validation and quality control workflows, streamlining data review and cleansing
- Authored SDTM database specifications and automated the production and validation of SDTM and ADaM datasets

## SKILLS

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*Programming:* Python (Pandas, NumPy, Spark), SQL, SAS, R, Redis, Kafka, Airflow, AWS (EC2, S3)

*Analytics:* Data ETL & Validation Development, Reporting Automation, Monte Carlo Simulation, Dashboarding

*Finance:* Risk Modelling & Management, Bloomberg APIs, Stress Testing, Fixed Income & Equity Derivatives

## EDUCATION

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M.Sc. in Statistics (4.0/4.0), University of Ottawa – Ottawa, Canada

2018.09 - 2020.08

B.Sc. in Mathematics (3.7/4.0), Zhengzhou University – Zhengzhou, China

2014.09 - 2018.07