# LINYI (LINCOLN) GUO

## SUMMARY

- Software Engineer and quant developer with 4+ years of experience building scalable data systems and highperformance applications in production environments.
- Expertise in Python, SQL, distributed systems, and cloud platforms (AWS), driving 30% 50% efficiency gains through automation, latency reduction, and system optimizations.
- M.Sc. in Stat & FRM-certified, bridging deep analytics with software engineering to tackle data-driven challenges.
- Passionate about designing real-time, high-availability infra and leveraging ML/AI for intelligent automation.

## WORK EXPERIENCE

#### Senior oftware Engineer, GBME, Scotiabank - Toronto, ON Software Engineer, GBME, Scotiabank - Toronto, ON

- 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

- 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

- 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

*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

## EDUCATION

M.Sc. in Statistics (4.0/4.0), University of Ottawa – Ottawa, Canada B.Sc. in Mathematics (3.7/4.0), Zhengzhou University – Zhengzhou, China May 2021 - Oct 2021

Nov 2021 - Feb 2024

Apr 2024 - Current Mar 2024 - Mar 2025