

LINYI (LINCOLN) GUO

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SUMMARY

- Over 5 years of professional experience in Quantitative Analytics, Machine Learning, Statistical/Financial Modeling, NLP, Data Pipeline Development, Data Manipulation, Data Visualization, Financial Risk Management
- Demonstrated working records of building and enhancing SACCR model framework, automating data manipulation, improving data accuracy, conducting model development, facilitating dashboards and workflows
- Proficient in programming/tools: Python, SQL, Power BI, PySpark, Bash, Git, Docker, AWS, Jira and Bitbucket
- Strategic thinker, excellent co-worker and positive self-starter with great adaptability to a fast-paced environment
- Motivated life-long learner with a huge passionate in data science and data-driven projects

PROFESSIONAL EXPERIENCE

Quantitative Analytics Manager, The Bank of Nova Scotia - Toronto, ON **November 2021 - Current**

- Optimize **SACCR** model and conduct **code development** with an accumulated decrease for exposure at **3 billion CAD**
- Design and write scripts and **data ETLs** to decrease running time and manual workload at average **30% - 50%**
- Construct and enhance **Basel III Reforms** Model Development and **Stress Testing** with **FO, IT** and **business** stakeholders
- Host and lead the monthly **SACCR/IMM CCR exposure and capital** calculation and validate with **SQL, Python & PySpark**
- Initiate and design strategies for **quantitative analytics**, and prepare business reports/dashboards for senior management
- Write and prepare **model development** documents and **memo**, cooperate with **MVA** and push to production release
- Utilize **statistical modeling**, **machine learning** and **NLP** for outlier detections and fuzzy string matching
- Responsible for training new teammates and resolving ad-hoc questions from **FO, CM, TFRM, IT** and others

Statistical Programmer, Everest Clinical Research Company - Toronto, ON **May 2021 - October 2021**

- Performed **clinical trial database** quality/integrity checks by generating **SAS** data **TLGs** for data reviewing and cleaning
- Developed **SAS** programs and generated complete, accurate and validated statistical **TLGs** in well-defined formats
- Programed and performed quality control of **SDTM** and **ADaM** datasets according to the dataset specifications
- **Developed** **SDTM** dataset specifications under the supervision of a Senior Statistical Programmer or a Biostatistician
- **Documented** data and programming information in accordance with Corporate Governing Documents
- Managed electronic **data transfers** from trial sponsors or other external clinical trial data vendors

Research & Teaching Assistant, University of Ottawa - Ottawa, ON **September 2018 - August 2020**

- Significantly reduced the prediction error (MSE) by **25%** on average for the US unemployment dataset by applying **hidden Markov models** (a.k.a **state space models**) and **Bayesian analysis**
 - Conducted **HMMs** to break down retail sales datasets, and achieved better **visualization** results with **Statistics Canada**
 - **Simulated** 5000+ time series data using Monte Carlo Markov model (**MCMC**) in **R, Python** and **AWS cloud server**
 - **Tuned** **HMMs** under specific parameters and adopted **parallel computation** to accelerate the training
- Delivered tutorial courses and graded assignments and test paper in Math and Stat for over 700 undergraduates

SKILLS & CERTIFICATES

Speciality: Quantitative Analytics, Machine Learning, Financial/Statistical Modeling, Data Manipulation, Data Pipeline Development, Data Visualization, NLP, Pricing Model, Regression Testing, Risk Management, Exposure and Capital Analytics

Certificate: Financial Risk Manager (GARP), AWS Certified Cloud Practitioner (AWS), IBM Data Science Professional Certificate (IBM), Deep Learning (Deeplearning.ai), SAS 9.4 Advanced & Based Programming (SAS)

Coding/Tools: Python, SQL, POWER-BI, PySpark, R, SAS, Git, Bash, Unix, Docker, AWS, Jira, Bitbucket, Markdown, LaTeX

EDUCATION

FRM, Global Association of Risk Professionals **2021 - 2023**

M.Sc. in Statistics (9.8/10.0), University of Ottawa – Ottawa, Canada **2018 - 2020**

B.Sc. in Mathematics (3.7/4.0), Zhengzhou University – Zhengzhou, China **2014 - 2018**