Ruize (Richard) Luo

3112 - 33 Sheppard Avenue East, North York, Ontario, Canada

+1 (647) 339-5825 | ruize.luo@mail.utoronto.ca | luoruize

Education

University of Toronto — *Toronto, Ontario, Canada*

Non-Degree Graduate Program, Computer Science — *Sep. 2017 - Present*

Courses:

- Algorithm Design, Analysis and Theory
- Introduction to the Theory of Distributed Computing

University of Toronto — *Toronto, Ontario, Canada*

Honours Bachelor of Science, Statistical Sciences — *Sep. 2011 - Jun. 2015*

CGPA: 3.94/4.00

Major Course Average: 95.4/100.0

Core Courses:

- Statistical Methods for Data Mining and Machine Learning (100/100)
- Statistical Computation (98/100)
- Stochastic Processes (95/100)
- Time Series Analysis (92/100)
- Theory of Statistical Practice (94/100)
- Foundations of Real Analysis (99/100)

Work Experiences

Capital One Bank (Canada Branch) — *Toronto, Ontario, Canada*

Senior Data Scientist — *Jun. 2017 - Present*

Data Scientist — *Sep. 2015 - Jun. 2017*

- Built a core risk model and its end-to-end scoring pipeline for customer management.
  - The whole process involved sample selection, data pull, data cleaning and validation, feature creation and selection, model build and validation, model deployment, and documentation.
  - Used SQL, SAS and Tableau for data cleaning and validation, and R for feature selection and model build
  - Deployed the model on our internal scoring platform as a Python package
- Wrote Python package to programmatically generate complex features from raw data.
- Built Monte Carlo simulation in Python for call volume prediction.
- Continuous monitoring of all internal statistic models.
  - Monitoring the distribution shift in model inputs and the performance of model outputs; detect and resolve model failures.
  - Automated the process to generate monitoring reports.

Manulife Financial — *Toronto, Ontario, Canada*

Actuarial Co-op | U.S. Life Valuation Projects Team — *May. 2014 - Sep. 2014*

- Actively participated in the Valuation System Transformation Project.
  - Populated Excel sheets and compared to AXIS results to validate models used to produce reserve for quarterly reporting to senior management.
  - Repaired the VBA macro used to perform PPM (IFRS) reserve calculations.
  - Wrote VBA macros to transform data in Excel sheets for AXIS table building, saving my team's time by automating the process.
  - Ran queries in AXIS to obtain information assisting model checking.

Projects

STA490: Statistical Consultation, University of Toronto *Toronto, Ontario, Canada*

Course Project *Oct. 2014 - May. 2015*

- Collaborated as a group with a student on her research project in Ecology and Evolutionary Biology. The project inspects the behavioural patterns of different groups of golden headed lion tamarins (GHLT) in the presence of different predictors.
  - 10 years of field observational data (140K observations).
  - Applied hierarchical clustering in R to group predictors based on their preys.
  - Used Markov Chain to model GHLT behaviour changes in time. Wrote R program to estimate the transition matrix, stationary distribution and confidence intervals.

Extracurricular Activities

Hart House Investment Club, University of Toronto *Toronto, Ontario, Canada*

Senior Analyst | Quantitative Analysis Team *Sep. 2014 - Jun. 2015*

- Used other teams' analyses as prior along with historical data to produce posterior distribution of stock prices, then hedge the portfolio based on the results with sector ETFs.

Victoria College Badminton Club, University of Toronto *Toronto, Ontario, Canada*

Vice President *Sep. 2012 - Sep. 2014*

- Managed equipment and internal communication. Assisted the president on various internal and external issues such as applying for funding and court rentals.

Honors & Awards

2012 - 2015 **Samuel Eckler Scholarship in Actuarial Science**, University of Toronto
2012 - 2015 **Victoria College Dean's List**, University of Toronto
2013 **The Edward Gladstone Schafer Memorial Scholarship**, University of Toronto
2011 **University of Toronto Scholars**, University of Toronto