Ruize (Richard) Luo

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Skills

Languages: R (data.table, ggplot2, Rshiny, etc.), Python (tensorflow, numpy, dask, etc.), SQL, VBA, Matlab
Models: Regressions, Neural Networks (Autoencoder, MLP, CNN, GAN), Tree-based Models, Gradient Boosting Models, Anomaly Detection, Model Interpretation
Techniques: Automatic Feature Creation, Large-scale Feature Selection, Data Cleaning, Data Pipeline, Scoring Pipeline

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 statistical 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.

Education

University of Toronto   *Toronto, Ontario, Canada*
NON-DEGREE GRADUATE PROGRAM, COMPUTER SCIENCE   *Sep. 2017 - Present*
GPA: 4.0/4.0
Courses:

- CSC2420: Algorithm Design, Analysis and Theory (A+)
- CSC2221: Introduction to the Theory of Distributed Computing (A+)

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

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.