LINYI (LINCOLN) GUO

Toronto, ON | (+1)613-630-0521 | lincoln.gly@gmail.com | *Website* | *LinkedIn* | *GitHub*

SUMMARY

- Data Analyst with 2+ years of experience in data management, data analysis, statistical modelling and machine learning
- Outstanding analytical skills with ability to create reports and convey results clearly and succinctly
- Demonstrated record of facilitating predictions and performing ad-hoc analysis with statistical methods
- Exceptional skills in statistical programming languages such as Excel, SAS, R, SQL and Python
- Excellent team player and self-starter with great communication and presentation skills
- A motivated Master of Science in Statistics graduate (9.8/10.0)

PROFESSIONAL EXPERIENCE

Research Assistant, University of Ottawa - Ottawa, ON   September 2018 – October 2020
- Collaborated with Statistics Canada and my supervisor upon the seasonal adjustment problem
- Brought down the prediction error (MSE) by 25% on average for the US unemployment dataset by applying hidden Markov models (aka state space models) and Bayesian analysis
- Removed the seasonal influence successfully and promoted the business and data analysis process
- Collected and cleaned 30+ monthly retail sales datasets from StatCan and third-party platforms by **Excel**
- Constructed HMMs to break down the retail sales dataset into trend, seasonal and noise components, and achieved better visualization results using **R**
- Customized HMMs under specific parameters and adopted parallel computation to accelerate the training

Teaching Assistant, University of Ottawa - Ottawa, ON   September 2018 – October 2020
- Delivered tutorial courses in calculus and algebra for over 200 undergraduates
- Helped invigilation process, revised assignments and graded test paper for more than 500 students
- Assisted undergraduates in dealing with learning problems, and provided regular, accurate and timely feedback

Data Analyst Intern, China Life Insurance - Henan, China   July 2016 – September 2016
- Maintained the local branch's database with **SQL** on a daily basis, including updating and removing data
- Collected, input and analyzed clients' data from salesmen, marketing channels and other sources
- Utilized **Excel** to compute statistical data and draw diagrams to provide actionable insights upon clients' data
- Compiled visualised analysis reports and presented the results for decision making

PROJECTS

CANDEV Data Challenge: Government Funding
- Collected the raw funding data over 400M from Canada government websites and cleaned with **SQL**
- Validated data and filtered variables by frequency tables and factor analysis
- Provided bar plots, frequency tables and other advanced diagrams such as dynamic bubble plots, geographical maps and their combination to present and illustrate the cleaned funding data using **R**
- Published the whole project as a web-based application through **R Shiny** Server

Mobile Phone Customer Behavior's Analysis and Prediction
- Drew frequency table, bar chart, fan chart and computed descriptive statistics to explore data with **R** and **Excel**
- Utilized techniques in survival analysis such as cox regression to analyze and select variables
- Built and trained logistic models and decision trees upon training set for prediction
- Tested and compared the performance on test set and made ad-hoc analysis
- Achieved 87% prediction accuracy on average for both models in the end

Hand-written Digit Recognition and Overview of Graph Neural Network
- Built a perceptron (1-layer NN) from scratch using **Python** and achieved 91% accuracy
- Utilized library **keras** to build a 2-layer NN and elevated the accuracy to 98% from 91%
- Self-studied the GNN, and wrote an overview to introduce GNN and how it works

EDUCATION

M.Sc. in Statistics, University of Ottawa – Ottawa, Canada   September 2018 – October 2020
GPA: 9.8/10.0
B.Sc. in Mathematics, Zhengzhou University – Zhengzhou, China   September 2014 – June 2018
GPA: 83.4/100

PROGRAMMING & CERTIFICATIONS

Programming: R, SAS, Python, SQL, Microsoft Office, Markdown, LaTeX, Git(Hub), MATLAB
Certifications: SAS 9.4 Base Programming (SAS), Structured Query Language (SQL) using SAS (Coursera), SAS Programmer (Coursera & SAS), Deep Learning(Coursera & Deeplearning.ai), 2019 Ontario HPC Summer School (Queen's University)