**Yifan Cheng**

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**EDUCATION**

**University of Toronto** September 2020 – Dec 2023 (Expected)

*Honor’s Bachelor of science, Specialist in Statistics*

* **Cumulative GPA:** 3.59/4
* **Relevant Courses:** Probability theory, Statistical inference, Applied machine learning, Probabilistic machine learning, Regression analysis, High dimensional data analysis, Bayesian statistics, Time series analysis

**ACADEMIC PROJECTS**

**DataFest Data Analysis Competition** April 2023

*University of Toronto's Department of Statistical Sciences*

* Collaborate in a team to work on a dataset from American Bar Association based on a data analysis of legal services and clients questions using R code and present findings to a panel of industry judges
* Using statistical methods to find the distribution of all cases and classify the reasons that why some cases are unsolved, then predict the future trend of unsolved cases.
* Perform data visualization skills and dataset cleaning to find the optimal solution for American Bar Association providing better services to underprivilege groups across the US.
* <https://github.com/YifanCheng0131/DataFest2023/blob/main/Data%20Fest%20Group%2011%20(1).pdf>

**Linear Regression Analysis of Student Mid-term Scores and Study Habits** Aug 2022

*Data Analysis Course Project, University of Toronto*

* Collected and analyzed data on students’ mid-term scores, as well as relevant variables, such as studying hours, time spent on miscellaneous activities, and attendance in office hours
* Applied Linear regression techniques to build predictive models that could accurately forecast students’ mid-term score; fitted regression models with different variables and their interactions, testing for statistical significance, such as R-squared and AIC; selected the best model and complied findings into a detailed 18-page report
* **Programming language used:** R (ggplot2, dplyr, MASS)
* <https://github.com/YifanCheng0131/1-Data-Analysis-Group-project>

**CAS Case Competition: TUO Liabilities Estimate Report** Jan 2022

* Tested multiple data cleaning and analysis methods, using triangle method to estimate the future labor liabilities.
* Developed advanced statistical analysis and data cleaning skills using Excel and knowledge learned from CAS, including the use of pivot tables, data validation, conditional formatting, and Solver
* Collaborated with a team of 4 to prepare an online presentation to senior actuaries, which involved analyzing complex data, developing visualizations, and presenting findings in a clear and concise manner
* <https://github.com/YifanCheng0131/CAS-case-competition>

**Independent Reading Project: Data Science and Machine Learning Methods in Finance** June 2023

*Machine Learning Course Project, University of Toronto* (supervised by professor Dehan Kong)

* Generally introduced the mathematical derivation and statistical properties of famous supervised learning and unsupervised learning techniques and algorithms (regression analysis, discriminant analysis, Bayesian Linear Regression, PCA, Probabilistic PCA).
* Applied Linear Regression, Logistic Regression, Discriminant Analysis and PCA to solve real-life problem: stock price prediction by Linear Regression and Regularized Regression, and detection of personal credit by Logistic Regression, Discriminant Analysis, and PCA.
* <https://github.com/YifanCheng0131/Data_Science_in_Financial_Application>

**PROFESSIONAL EXAMS**

* Society of Actuaries Exam P – Probability (Passed) September 2022
* Society of Actuaries Exam FM – Financial Mathematics (Passed) August 2023

**ADDITIONAL INFORMATION**

**Technical Skills:** R, Python, SQL, NumPy, MS Office Suite (Excel, Word, PowerPoint, Outlook)

**Languages**: English (Full professional proficiency), Mandarin (Native)

**Interests:** Soccer(<https://www.instagram.com/utcssafc/> participated the intramural soccer game), Cooking, Fitness