Jingxuan (Anna) He

• (226) 899-2596 • jingxuan.he@mail.utoronto.ca • LinkedIn: anna-jingxuan-he

SKILLS

- **Technical Proficiencies:** Python, R, SAS, SQL, VBA, C, MATLAB, Power BI
- **Professional Skills:** Statistical Modelling, Machine Learning, Categorical Data Analysis, Survey Sampling & Experimental Design, Cancer Biology, Molecules and Cells, Genetics and Evolution, Homeostasis and Environment
- **Qualitative Abilities:** Detail-Oriented, Critical Thinking, Task Prioritization, Time Management, Collaboration, Communication

EDUCATION

Dalla Lana School of Public Health, University of Toronto — Toronto, Ontario
Master of Science in Biostatistics — *Sep 2024 – Aug 2025*

Department of Mathematics, University of Waterloo — Waterloo, Ontario
Bachelor of Mathematics with Co-op (Major in Financial Analysis and Risk Management, Minor in Statistics) — *Sep 2018 – Aug 2023*

- **Academics:** cGPA 3.93/4.0

CERTIFICATIONS

- Logistic Regression in R for Public Health | Imperial College London, Coursera — *Jul 2024*
- Survival Analysis in R for Public Health | Imperial College London, Coursera — *Jan 2024*
- Introduction to Genomic Technologies | Johns Hopkins University, Coursera — *Jan 2024*
- Chartered Financial Analyst (CFA) Exam Level I | CFA Institute — *May 2023*
- Financial Risk Manager (FRM) Exam Part I | Global Association of Risk Professional — *May 2022*

PROFESSIONAL EXPERIENCE

OPTrust Capital Markets — Toronto, Ontario
Quantitative Research Intern – Total Fund Completion Portfolio Strategies — *Sep 2022 – Apr 2023*

- Created a bank stress Power BI dashboard with a tight deadline to monitor financial market stress from various aspects
- Developed performance evaluation metrics in Python to assess the effectiveness of existing and prospective trading strategies
- Performed quintile analysis on the MXCN index to assess the China rally across different factors and time horizons
- Devised "Buy the Dip" strategies and conducted sensitivity analysis to achieve a cumulative return of 130% with drawdowns below 15% during market stress
- Pioneered a multi-dimensional forecasting approach by integrating macroeconomic factors, risk premia, and technical signals to generate dynamic predictions for equity indices using factors selected by the elastic net regression under the Relevance framework

OMERS Capital Markets — Toronto, Ontario
Analyst – Trading — *Jan 2022 – Apr 2022*

- Designed and fine-tuned multiple MS Power BI reports to enable informed trading decisions and improved investment execution
- Enhanced data visualization efficiency by developing VBA macros to integrate Bank of Canada holdings for repos into a database
- Optimized data query processes for traders by leveraging Bloomberg API, SQL, and Excel to create centralized resources

RELEVANT ACADEMIC PROJECTS

Diabetes Logistic Regression — *Jul 2024*

- Evaluated model assumptions by plotting density functions and scatter plots, and examined relationships between predictors and the outcome using cross-tabulation
- Combined categories or adjusted references to mitigate overfitting based on variable correlations, standard errors of the odd ratios, and the size of the odd ratios
- Conducted backward elimination to optimize logistic regression models for diabetes, ensuring accurate interpretation of results
- Assessed model fit using McFadden R-squared, AIC, C-statistic, Deviance, and Hosmer-Lemeshow statistic and tests, indicating robust model performance and calibration

Heart Failure Survival Analysis — *Jan 2024*

- Visualized the probability of survival over time since admission for heart failure patients through an overarching Kaplan-Meier plot, and conducted a Log-rank test in R to compare survival among different patient groups
- Investigated variables and performed descriptive analyses to understand missing values, optimizing data preparation for a comprehensive multiple Cox regression
- Employed Schoenfeld, Martingale, and Deviance residuals to evaluate various aspects of model fit, ensuring compliance with proportional hazards assumption, assessing linear relationships for continuous predictors, and identifying potential outliers
- Utilized backward elimination technique to identify the optimal model, offering valuable insights for public health decision-making through hazard ratios, p-values, confidence intervals, standard errors, and other statistics

US GDP Time Series Analysis — *Jul 2022*

- Applied log transformations to stabilize variance in quarterly US GDP time series data
- Fitted a linear regression model accounting for the observed seasonal component, linear trend, and quadratic trend
- Assessed the adequacy of the model by examining a time series plot of the residuals, a QQ plot, and a correlogram
- Tested for the significance of a positive lag-1 autocorrelation using the Durbin-Watson test statistic