

Tariq Cisse

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EDUCATION

University of Washington

Candidate, Master of Science in Biostatistics

Seattle, WA

September 2025 – March 2027

University of Toronto

Honours Bachelor of Science in Statistics, with High Distinction

Toronto, ON

September 2021 – April 2025

- Dean's List: 2022, 2023, 2024, 2025
- Coursework in Advanced Machine Learning and Data Mining, Statistical Inference, Probability, Stochastic Processes, Multivariate, Time-Series, Regression and Survival Analysis, etc...

WORK EXPERIENCE

Dalla Lana School of Public Health, University of Toronto

Toronto, ON

Research Assistant, Spatial Data Analysis | R, Python, PowerQuery, MS Office, GIS

September 2024 – April 2025

- Assisted the Geoinformatics of Spatial and Environmental Health Laboratory (Ge-iSEE) with (spatial) data analysis and of population health indicators in Ontario and in the UK.
- Developed engines to increase efficiency of data cleaning, processing, reconciliation and mapping of spatial data on air pollution, vegetation health and other environmental factors at 300,000+ sites spanning 20+ years.
- Performed literature screenings and reviews to assess and evaluate various study designs and statistical modeling methods.

Financial Services Regulatory Authority of Ontario (FSRA)

Toronto, ON

Risk Analyst (Co-op) | Python, SQL Server, Power BI, PowerQuery, DAX, MS Office

January – August 2023

- Raised efficiency standard in production of reports on 1,000+ Canadian employers and improved consistency of risk insights by leading data visualization processes, database management, validation and reconciliation tasks.
- Regularly provided critical insights and, performed and documented stochastic projections of fund's financial position with internal model for the production of sector reviews, risk appetite statements and inaugural report.
- Supported statistical analysis project to inform strategies with new investment manager by processing and analyzing data on various capital market variables.

PROJECTS

German Breast Cancer Study Group - Survival Analysis

April 2025

- Investigated effect of hormonal therapy, in R, on recurrence-free survival of 686 cancer patients, and found treatment to be effective based on non-parametric, semi-parametric and parametric models.
- Analyzed patients' survival data by producing Kaplan-Meier curves, Stratified Cox Proportional Hazards (PH) model and Weibull parametric model with Gamma frailty, adjusting for age, tumor size and grade, hormones, etc..
- Built and validated models using stepwise procedures, scaled Schoenfeld, Martingale and deviance residuals, log-log plots and Likelihood Ratio Tests.

Child Mind Institute - Severity Impairment Index - Ensemble Classification

March – April 2025

- Machine Learning project, in Python, facilitated by the Child Mind Institute for better understanding and prediction of problematic internet use among 3,960 children and teens, and assessing of their mental health.
- Trained XGBoost, Random Forrest and Support Vector Machine (SVM) classifiers with 40 features (demographic, physical activity, mental health indicators, etc...), and using Quadratic Weighted Kappa (QWK) as metric.
- Combined all three models into a Logistic Regression classifier for robustness and achieved very competitive results in comparison to top submissions in corresponding Kaggle competition (Top 8%).

Analysis of Hero Rats' Sensory Preferences - Longitudinal Bayesian Modeling

May – August 2024

- Supervised statistical modeling project, in R, analyzing 32 Hero Rats' odor preferences for TNT and Chamomile based on early-age exposure to these scents and training for detection of landmines and tuberculosis.
- Performed an Exploratory Data Analysis (EDA) including Reliability measures and Principal Component Analysis, fit Bayesian Linear Mixed-Effect Model and concluded analyses with Posterior Predictive Checks with 500 samples.
- Found rats' formal training to be of significance to their scent detection ability. The project was later presented at the University of Toronto Scarborough 2024 Undergraduate Research Symposium.

TECHNICAL SKILLS AND OTHER

Languages: R, Python, SQL, MATLAB, DAX, C

Tools and Libraries: pandas, NumPy, SciPy, scikit-learn, Matplotlib, seaborn, TensorFlow, PyMC, tidyverse, dplyr, ggplot, jupyter, R Markdown, MS Office, PowerBI, SQL Server, PowerQuery, LaTeX, GIS

Other: Bilingual (fluent in English and French)