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YIFEI MAGGIE MA

HIGHLIGHTS OF QUALIFICATIONS

- Passionate about generating data-driven insights and visualizations (portfolio: https://maggiema.rbind.io/projects)
- Proficiency with R, Python, JavaScript, HTML, GIS, StoryMap, DBMS, SQL, PostgreSQL, PostGIS
- Working experience with database management, data visualization, and spatial statistics techniques
- Demonstrated excellent communication, analytical, and problem-solving skills
- Positive, intellectually curious, goal-oriented, and strong commitment to personal and professional growth

EDUCATION

Statistics and Human Geography Majors, Geographic Information System (GIS) Minor

University of Toronto   *Expected: Apr 2021*
Honors Bachelor of Science

AWARDS

Mitacs Innovation Research Training Award   *Sep 2020 – Jan 2021*

- Awarded by Mitacs and University of Toronto, Department of Statistics
- Research Grant (Statistical Analysis on Residential School Mortality using Florence Nightingale's report 'Sanitary Statistics of Native Colonial Schools and Hospitals' published in 1863)

UTAGA Outstanding Undergraduate Research Award   *Oct 2020*

- Awarded by University of Toronto, Department of Geography and Planning

Esri Canada GIS Centers of Excellence Student Associate   *Oct 2020*

- Recognized by ESRI Canada and University of Toronto, Faculty of Arts and Science

COVID-19 Student Engagement Award   *Jun 2020*

- Awarded by University of Toronto, Faculty of Arts and Science
- Led a team of three to build a publicly accessible dashboard visualizing COVID-19 cases by demographic factors in Toronto neighborhoods over time as an effort to inform individual decision-makings

PROFESSIONAL EXPERIENCE

Contract Researcher   *May 2021 – July 2021*
Flipp

- Leverage mobile app usage data to examine the effect of COVID-19 on food shopping behaviors using PostGIS
- Set up functional geospatial database in PostGres for full data pull of 24M rows and 20GB in size

Planning Intern   *Sep 2020 – May 2021*
City of Toronto, City Planning Division, Strategic Initiatives, Policy and Analysis

- Gather and synthesis information from planning documents and databases to generate insights on patterns of consistency in the approved and anticipated development around pre-determined transit stations
- Conduct statistical analysis in order to provide next-step data-driven recommendations to city officials
- Interview community planners to confirm hypothesis and collect materials in preparation for presentations

Geospatial Researcher   *April 2019 – Jan 2021*
St. Michael's Hospital, Centre for Global Health Research

- Applied Bayesian inference and other statistical models to fit data from a variety of subjects such as air quality, traffic fatalities, COVID-19 mortality, and residential school mortality using R language

- Led spatial component of Bayesian analysis, in collaboration with scholars from UBC Master of Data Science, resulting in an academic journal in writing quantifying the spatial effect of COVID-19 among LTC facilities
- Designed and built front-end interactive map applications using Mapbox API, HTML, JavaScript, and CSS
- Assigned spatial information to sample units, improved spatial accuracy of spatial dataset from 95% to 98%
- Retrieved and aggregated data from 400+ tables using SQL and PgAdminIII; complied data into an actionable format from the Million Death Study database, visualized mortality trend and other findings

Crime Analyst Intern   *Jan 2020 – April 2020*

Toronto Police Service, Analytics & Innovation Unit
- Automated geocoding process by developing VBA macros and R scripts, successfully reduced redundant work and improved efficiency
- Leveraged ticket and collision data to deliver insightful recommendations to key decisions makers within Traffic Services regarding the effectiveness of suggested enforcement area and other business strategies
- Identified the spatiotemporal patterns of traffic related offences and events through the use of spatial analysis and other research methods
- Developed evidence informed recommendations for the deployment of the Vision Zero Enforcement Team over space and time

Transcription and Data Analysis Assistant   *Dec 2018 - Mar 2019*

Innovation Hub, University of Toronto
- Provided across research teams with data analysis support; picking out key themes from design thinking framework
- Presented results to 9 senior level stakeholders and provided guidance on potential solutions that could better students' experience on campus

RELEVANT PROJECTS

Student Consultant   *Sep 2020 – May 2021*

School of Cities, Multidisciplinary Urban Capstone Design Project   [story map]
- Liaised with clients to build a design solution that aids in creating community within its $2 billion condo network
- Led market research component of the design process including survey development, implementation, distribution, and survey data analysis and report; successfully translated survey outcome into actionable insights
- Collaborated cross-functionally with 4 teams, Partnerships, Marketing, Product, and Operations, to build client's preferences into mobile app; designed wireframe and built Figma high-fidelity prototype

Research Team Leader   *Jan 2020 – Apr 2020*

GGR462 GIS Research Capstone Project
- Defined suitable regression model and drove statistical analysis using R and GIS, leading a team of four
- Successfully explored the research question examining cultural preservation through the study of demographic change and culturally specific restaurant presence in Toronto's ethnic enclaves
- Developed web-based interactive story map to illustrate research question, process, and deliverable

Researcher   *Sep 2019 – Apr 2020*

University of Toronto, Department of Environmental Science   [see project]
- Used simulation software COBWEB to help start-up company model success factors of retail businesses

TECHNICAL SKILLS

Web Maintenance | HTML • CSS • JavaScript
Machine Learning | Complex Regression Models • PCA • Automation Techniques • Classification • Decision Trees
Data Visualization | R • Python • JavaScript • Mapbox • GIS
Predictive Modeling | Bayesian Inference • Generalized/Simple Linear Regression
Database Management | SQL • PostgreSQL • PostGIS