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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 MS Office, R, ArcGIS, StoryMap, SQL, Python, JavaScript, HTML, PgAdminIII
- 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 & ACKNOWLEDGEMENTS

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

RELEVANT EXPERIENCE

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
- 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
- Designed and carried out epidemiology research project independently
- Completed data mining/ data wrangling tasks using various software such as RStudio, ArcGIS, QGIS, and SQL
- Designed and built front-end interactive map applications using Mapbox API, HTML, JavaScript, and CSS

CRIMINAL INTELLIGENCE 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

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

OTHER EXPERIENCE

STUDENT CONSULTANT ***Sep 2020 – Present***

School of Cities, Multidisciplinary Urban Capstone Design Project [story map]

- Develop design concepts and prototypes of working community ecosystems for industry client, *Key*, following engineering design principles and collaborating with 6 team members from various academic disciplines
- 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
- Designed wireframe for mobile app keeping in mind sense of community and built Figma low-fidelity prototype
- Engage in primary and secondary research to better understand what community means in the context of urban vertical neighborhoods and develop measures of community vitality through a weighted rubric
- Work alongside company executives, manage professional relationships with clients and faculty supervisor

PLANNING PLACEMENT STUDENT ***Sep 2020 – Present***

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

RESEARCH ASSISTANT ***Sep 2019 – Apr 2020***

University of Toronto, Department of Environmental Science

- Using simulation software COBWEB to help start-up company model success factors of retail businesses

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

TECHNICAL SKILLS

Database Management: SQL; Python; PgAdminIII
Machine Learning: Complex Regression Models; PCA; Automation Techniques; Classification; Decision Trees
Data Visualization: R; JavaScript; d3; Mapbox
Data Analysis and Modeling: R; VBA; ArcGIS; QGIS
Web Maintenance: HTML; CSS; JavaScript
Mapping Software: ArcGIS Desktop; ArcGIS PRO; QGIS; GrassGIS