Tony Zhang
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SUMMARY OF QUALIFICATIONS

- 1+ years of public sector experience across three Ontario ministries, supporting evidence-based policy and service planning.
- Advanced data analysis and visualization skills using Power BI, Excel, Python, R, and SQL.
- Proven success in develop dashboards, forecasting trends, and identifying operational improvements.
- Strong record of preparing reports and actionable insights for senior leadership and non-technical audiences.

SKILLS SUMMARY

Technical Skills

- **Visualization & Reporting**: Power BI (dashboard design, KPI monitoring), Excel (PivotTables, Formulas), Tableau
- **Programming:** Python (Numpy, PyTorch, Scikit-Learn, Tensorflow, Keras, Scrapy, Matplotlib, Seaborn), SAS, R (ggplot2, Tidyvierse, INLA, dplyr, caret), and SQL (MySQL, Postgres SQL)
- **Statistical Analysis:** ANOVA, Tukey's Test, T-tests, Linear Discriminant Analysis, Trend Analysis, Time Series Analysis, Machine Learning Model, Deep Learning Model
- **Microsoft Office suite**
- **Big Data Technique**: Spark, Postgres SQL, Hadoop

Communication & Project Delivery

- Produced executive-level reports and one-page summaries for directors and cross-ministry stakeholders.
- Experienced in stakeholder engagement, user testing coordination, and project documentation.

RELEVANT WORK EXPERIENCE

Junior Policy Advisor / AODA Compliance Policy and Accountability Unit / AODA Compliance Assurance Branch / Accessibility for Ontarians with Disabilities Division / Ministry of Seniors and Accessibility
April 2025 – Present

- Collaborated with the Senior Policy Advisor to review and revise the unit's annual Knowledge Article on the Accessibility for Ontarians with Disabilities Act (AODA), ensuring it reflected the most up-to-date legislative changes and operational practices.
- Designed and executed test cases for transitioning both the Organization Profile Update form and the Accessibility Compliance Report form from static PDFs to interactive, accessible webforms within the internal portal. Collaborated with cross-functional teams to ensure the new forms met usability, functionality, and AODA compliance standards, significantly improving user experience and digital accessibility.
- Extracted and analyzed data related to MSAA audits on long-term care (LTC) organizations for the 2024 campaign, in preparation for the MSAA-LTC meeting. Synthesized key trends and insights into a one-page summary to support the Director's strategic understanding and decision-making.
- Led developing the Accessibility Compliance Report (ACR) training guide to support its deployment, ensuring both clarity and accessibility standards were met.

Statistical & Research Analyst / Statistical Modelling and Trending Unit / Education Analytics Branch / Strategic Policy & Planning Division / Ministry of Education / OPS   **August 2024 – April 2025**

- Reviewed and validated school board requests to exchange designated priority schools for the Math Strategy team, ensuring data accuracy and consistency. This quality control supported informed decision-making and maintained the integrity of the provincial priority school dataset.
- Conducted a longitudinal school-level analysis of EQAO performance in Grades 3, 6, and 9 across priority schools, comparing pre- and post-funding periods (2021–22 to 2023–24). Identified shifts in underperformance rates to assess the impact of targeted financial support on student outcomes.
- Analyzed three-year student-level EQAO data to compare performance distributions between priority

and non-priority schools. Delivered insights on achievement trends across performance levels, enabling the Math Strategy team to tailor interventions more effectively.

- Applied statistical methods including ANOVA, Tukey's Test, trend analysis, and T-tests to validate findings and ensure analytical rigor. Produced grade-specific reports and a comprehensive summary, supporting evidence-based recommendations for the Math Strategy team.
- Supported the functional testing of the Ministry's Graduation Rate Cohort Tool (GRAD Tool), collaborating with the Support Lead to identify and resolve usability issues. Helped ensure the tool's readiness for province-wide deployment.

Data Analyst Assistant / Emergency Management Ontario / OPS   **May 2024 – August 2024**

- Partnered with the policy analyst team to resolve unmatched records in historical emergency management data. Developed and applied Python scripts to automate data matching processes, achieving an 80% resolution rate and significantly improving data integrity for future analysis.
- Applied pre-trained NLP models to identify semantic similarities between unstructured emergency records and predefined hazard categories. Achieved a 75% classification success rate, enhancing the Emergency Management Office's (EMO) capacity to track and analyze hazard trends over time.
- Supported a senior data analyst in developing a Power BI dashboard for the Preparedness Centre of Excellence (PCoE), visualizing volunteer engagement data across the Ontario Public Service (OPS). The dashboard enabled data-driven recommendations for optimizing volunteer training and deployment strategies.

Data Scientist (Coop) & Research Assistant / Linamar Corporation / Guelph, ON   **May 2023 – Sep 2023**

- Collaborated with the Linamar Manufacturing Monitoring System(LMMS) team to resolve over 1,000 terminology mismatches across 60 global manufacturing sites. Standardized data definitions and created a centralized reference list, improving data consistency and streamlining future data collection processes.
- Developed a customized outlier detection system by integrating machine-specific designed cycle times with z-score thresholds. This solution enhanced anomaly detection accuracy and supported proactive maintenance decisions.
- Conducted a comparative analysis of production line utilization between Hastech and Linergy using Linear Discriminant Analysis, independent two-sample T-tests, and other statistical methods. Provided actionable insights to optimize resource allocation and operational efficiency.
- Designed and implemented an automated alert system to monitor deviations in machine cycle times, prompting timely updates to designed cycle time values. This system improved operational accuracy and reduced downtime due to outdated configurations.
- Built automation scripts using Python (SQLAlchemy, SciPy, NumPy, and Pandas) to streamline data processing and reporting tasks. These tools reduced manual workload and improved the efficiency and reproducibility of analytical deliverables.

OTHER PROJECTS

- Songs Recommendation System
- Stock Forecasting with a Hybrid LSTM Model
- Toronto Crime Data Analysis by **Geographically Weighted Regression**
- Credit Score Classification by **Random Forests**

EDUCATION

Master of Data Science   **September 2022 – December 2023**
University of Guelph / Guelph ON

Bachelor's in Science – Statistical Specialist and Mathematics Major   **September 2017 – June 2021**
University of Toronto / Toronto ON