Alex Zakarian

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https://thealexzakarian.github.io/alexzakarian.github.io/

EDUCATION

- **MSc, Computer Science with Artificial Intelligence**   **University of York | 07/2024 - Present**
- **MScA, Biotechnology** *(High Distinction)*   **McGill University**
  - Transcriptomics Certificate
  - Python Certificate
- **Project Management Graduate Certificate (High Distinction)**   **Conestoga College**
- **Honors Bachelors, Biology** *(High Distinction)*   **Wilfrid Laurier University**
  - Recipient of the Dr. Kaye Hayashida Biology Award

TECHNICAL SKILLS

- Programming & Development: Python (Pandas, NumPy, TensorFlow, Scikit-learn), SQL, Java, MATLAB
- Data Analysis: SPSS, Weka, Power BI, Tableau, MS Excel, Data Structures
- Machine Learning & AI: Neural Networks, Genetic Algorithms, Deep Learning, Predictive Modeling, Natural Language Processing (NLP)
- Biotechnology Techniques: ELISA, PCR, Protein Purification, Cell Culture, Plasmid Production, Viability Assays

PROFESSIONAL EXPERIENCE

Research Assistant   **07/2024 - Present**
Hamilton Urban Core Community Health Centre
- Secured over $25 million in funding for the Hart Hub initiative through the Ministry of Health by conducting detailed statistical analyses, executing comprehensive community needs assessments, and presenting evidence-based justifications that aligned with provincial priorities and funding objectives
- Led comprehensive qualitative and quantitative research projects, delivering actionable insights for stakeholders
- Performed advanced data analysis and statistical modeling using SPSS, SQL, and Power BI
- Enhanced data visualization for over 8,000+ client records, improving decision-making processes and data accessibility
- Designed and conducted surveys, interviews, and focus groups to support community health research initiatives
- Collaborated with multidisciplinary teams to deliver presentations and detailed reports for executive stakeholders

Clinic Manager   **08/2021 - 07/2024**
Crossroads North Medical Clinic
- Managed outpatient operations, improving efficiency and patient outcomes through process optimization
- Oversaw clinical workflows including patient triage, intake procedures, and lab specimen analysis (hematology, neurology, toxicology)
- Coordinated with multidisciplinary teams to align treatment plans with patient care goals
- Streamlined medication management processes, ensuring alignment with diagnostic data and patient safety

Research Associate Intern   **05/2023 - 09/2023**
Targa Biomedical
- Optimized transfection techniques in cell culture using nanoparticles and pharmaco-optimizers to enhance efficiency and cell viability
- Executed cell culture protocols, including cryopreservation, plasmid production, and bacterial cultures, ensuring optimal cell growth and maintenance
- Performed seeding, passage, plating, transfection, and assays (nuclei staining, live/dead, metabolic) to assess cell health and viability
- Collaborated on a cryopreservation viability protocol to improve cell viability assessments
- Worked effectively within a team, upholding aseptic techniques and lab safety standards
- Documented experiments rigorously and presented research findings clearly to lab members and supervisors

CERTIFICATIONS

- Good Clinical Practice (GCP)
- Health Canada Division 5 Certification
- Transportation of Dangerous Goods (TDG/IATA)
- Responsible Conduct of Research (RCR)

PROJECTS

- AI-Driven Child Mortality Prediction Application
  - Developed an accurate AI-powered tool to predict child mortality, leveraging TensorFlow, Neural Networks, and Scikit-learn
- Python-Based Student Activity Analyzer
  - Created a Python application to analyze activity logs, generating statistical outputs (mean, median, mode) and visualizations such as heatmaps and correlation graphs