

Elaheh Aghaarabi
Graduate Student

SUMMARY

Computer Science graduate student with strong quantitative skills, proficiency with data structures and algorithms, programming, software development, data analysis and machine learning with more than 4 years of experience in industry.

TECHNICAL PROFICIENCIES

- **Certifications and relevant courses:** Advanced Data Structure and Algorithm, Database Management Systems, Neural Network, Machine Learning
- **Programming language:** Python, C++, Java, HTML5, CSS, React
- **Frameworks and tools:** AWS, Flask, Git, Tensorflow, Numpy, Pandas, API, Sklearn, Django, MATLAB
- **Data Analysis:** MS SQL server, MySQL, MongoDB, Preprocessing data (cleaning, formatting, normalization, transformation, standardization), Data warehousing, Jupyter Notebook
- **Statistical Tools:** SAS, R, Regression, Hypothesis Testing, Clustering, Classification, Macros, Advanced Excel Functions, State-case

EDUCATION

- Towson University, M.Sc. Computer Science 2019 – Present
- University of British Columbia, M.Sc. Mechanical Eng. 2011 – 2013
- Polytechnic University, B.Sc. Mechanical Eng. 2006 – 2010

RELATED ACADEMIC AND INDUSTRY EXPERIENCE

Towson University – Maryland, United States

Graduate Student, 09/2019 – Present

- Developed a Java application with MySQL database and GUI components to manage orders, bills and employees' information for a food truck business ([CheeseUp.jar](#))
- Developed a Java GUI calculator application ([Java Calculator](#))
- Developed a predictive model to detect presence of Parkinson's disease ([Parkinson's detection](#))

1096841 B.C. Ltd – Vancouver, Canada

Research Analyst, 11/2016 – 12/2018

I was a research analyst of a small healthcare consulting company in Canada. We provided analytical consulting services to different clients. I was mainly responsible for project management and coordination, data analysis, and developing decision-analytic models for cost-effectiveness analysis.

- **Modelling:** developed probabilistic simulation models e.g. Markov model for cost-effectiveness of different healthcare interventions using VBA
- **Large database analysis using SAS:** developed individualized rate of smoking cessation for a given COPD patient with certain clinical characteristics using the Lung Health Study

E-One Moli Energy- Vancouver, Canada

R&D Mechanical Engineer, 5/2013 – 10/2016

Strategic planning engineer with the experience of working with R&D engineers and scientists to optimize the rechargeable battery production line, successfully delivered customized li-ion batteries to several well-known clients.

- Developed test plans and applied quality control methods to monitor and optimize the manufacturing process using statistical process control (SPC) and design of experiment (DOE)

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University of British Columbia (ACIS LAB) - BC, Canada

Graduate Research Assistant, 9/2011 - 4/2013

- Analyzed historical data from Quebec City water distribution network to develop a software platform to predict the drinking water quality and visualize it (master's thesis project)
- Performed data quality assurance on historical data from Quebec City water distribution network
- Applied different decision-making methods including weight assignment, hierarchical (AHP), fuzzy and genetic algorithm calculations in an extensive course project with a technical report
- Trained a neural network system to predict the water quality along the distribution network (master's thesis project)
- Applied quantitative and qualitative risk analysis methods on pollution level of drinking water (master's thesis project)