

3+ years' Medical Laboratory experience. Motivated individual with experience working in microbiology, chemistry, and molecular biology laboratories, capable of conducting complex tests, reviewing, and generating high-quality analytical data while meeting all time requirements.

EDUCATION

University of British Columbia, <i>Master of Data Science</i>	2023
University of British Columbia, <i>Bachelor of Science – Microbiology</i>	2019
Columbia College, <i>Associate Degree – University Transfer, Vancouver, Canada</i>	2015
Centre of English Studies Dublin – <i>Highschool – Grade 12, Dublin, Ireland</i>	2014

QUALIFICATIONS AND TECHNICAL SKILLS

Microbiological Techniques	Instrumentation Operation & Troubleshooting	Molecular Biology	Technical Skills	Programming Languages
Bacterial Plate Streaking	Astoria Flow Analysis	RNA/DNA Extraction	Data Modeling	Python: Altair Dash Matplotlib NumPy Pandas Plotly Sci-Kit Learn TensorFlow
Biochemical Identification	BOD-200 SCP Science	RNA/DNA Purification	Data Preprocessing	
Cannabis Microbiology	Compound Microscope	ELISA	Data Visualization	
Cell Broth Inoculation	Gas Chromatography – Mass Spectrometry (GC-MS)	Gel Electrophoresis	Deep Learning	
Environmental Microbiology	HACH Colorimetric Analysis	Column Chromatography	GitHub	
Food Microbiology	KingFisher Flex	Flow Cytometry	Machine Learning	
Gram Staining	MANTECH PC-Titrate	RT-qPCR	Statistical Analysis	R: dplyr ggplot Shiny Stan tidy
Membrane Filtration	PCR	Databases	Software & Tools	
Multiple Tube Fermentation	SHIMADZU			
Pour Plate	SmartChem 200 Analyzer	MongoDB	CSS	
Serology Analysis	ThermoFisher Ion Chromatography	PostgreSQL	Tableau	
		SQL	MS Visual Studio	

DATA SCIENCE PROJECTS

Inferential Study of Heart Disease R 	Dec., 2022
<ul style="list-style-type: none"> study identifying features linked to heart disease using permutation & Chi-Squared tests in R; analyze the correlation between heightened risks of heart disease and variables like age, gender, and cholesterol levels. 	
forxpy Python & R 	Feb., 2023
<ul style="list-style-type: none"> package for converting currency exchange rates using Bank of Canada data obtained through API connection; provide historical exchange rates and support multiple currencies at once. 	
suicideWatch Dashboard R 	Mar., 2023
<ul style="list-style-type: none"> dashboard analyzes suicide rates and socio-economic factors by visualizing the data by country, gender, age group over time; developed in Shiny and Dash, and includes interactive maps, bar charts, line plots. 	
Predictive analytics to support HLBC 8-1-1 and HEiDi triage UBC Faculty of Medicine 	May, 2023 – Jun., 2023
<ul style="list-style-type: none"> develop pipeline for pre-processing and training ML models for nurse triage using data with 300 features and 30,000 observations; build front- and back-end applications for the nurse and Data Scientist to interact with. 	

CAREER HISTORY

CardiAI Inc. – Delta, Canada	Nov., 2021 – Sep., 2022
<i>Medical Laboratory Technologist</i>	
<ul style="list-style-type: none"> perform COVID19 RNA extraction & purification; utilize qPCR techniques to detect SARS-CoV-2 infection in clinical samples; perform microbiological assays and tests for quality control in compliance with regulations; pioneer research in clinical diagnostics for cancer risks, food intolerances, drug compatibility and metabolic disorders. 	
CARO Analytical Services – Burnaby, Canada	Mar., 2021 – Nov., 2021
<i>Biomedical Laboratory Analyst</i>	
<ul style="list-style-type: none"> perform SARS-CoV-2 RNA extraction/purification and analyze the presence/absence of RNA in patient's samples using RT-qPCR; set up and conduct microbiological tests and laboratory analyses in support of quality control in various products; carry out required data analysis and processing (i.e., calculations, data review, data entry etc.); receive and ship supplies, assist in restocking of laboratory consumables/chemicals, and prepare analytical standards and reagents; decontaminate and dispose of samples according to local regulations; maintain logs, records and calibrate laboratory instrumentation as required by quality documents. 	

Microbiology Analyst

- microbiological testing of cannabis for human pathogens following FDA, U.S. & European Pharmacopeia standards;
- quantitative and semi-quantitative analysis of cannabis for bile-tolerant gram- bacteria, total yeast and mold, aerobic microbial count;
- prepare media, buffer solutions and control cultures using certified stocks;
- biochemical and serological identification of bacterial species;
- participate in R&D processes to optimize microbial testing of cannabis by novel qPCR-based methods;
- DNA extraction and analysis of bacterial DNA in cannabis products by RT-qPCR detection;
- prepare and analyze food and cannabis products for presence of pesticides and herbicides.

Agat Laboratories – Burnaby, Canada**Feb., 2020 – Mar., 2021****Microbiologist**

- perform method validation for microbiological water and soil testing following Standard Operating Procedures;
- conduct monthly environmental monitoring;
- operate and calibrate pH meter, IDEXX Quanti-Tray Sealer, compound light microscope;
- detect Total, Fecal, *E. coli* & *Enterococci spp.* of bacteria by enzyme-substrate methods of Colilert-18, Colisure & Enterolert;
- perform membrane filtration and multiple tube fermentation to identify Total, Fecal Coliforms, *E. coli* & *Salmonella spp.* of bacteria;
- quantify heterotrophic organisms (HPC) in water samples by standard method for SimPlate analysis;
- make and record observations, perform calculations, collect, and overview data for evaluation.

Inorganic Laboratory Analyst

- prepare samples for solid and aqueous digestion, extraction for Total Kjeldahl Nitrogen (TKN), total/dissolved mercury, strong/weak acid dissociable cyanide, chlorophyll A/B;
- prepare quality control and calibration standards for different instrumentations;
- perform routine analysis for ammonia, SAD/WAD cyanide, TKN, orthophosphate, anions, sulfide, total/residual chlorine, chemical oxygen demand, tannin and lignin, biochemical oxygen demand, total/dissolved organic carbon, chlorophyll A/B, UV transmittance/absorbance, electrical conductivity, acidity, alkalinity, turbidity using various methods and instrumentation.

Laboratory Technician

- receive and enter samples of various matrices into laboratory information management system;
- address any non-conformance, sample preservation and holding time issues;
- communicate any non-conformance issues between laboratory personnel and project managers.

Everything Wine Inc. – West Vancouver, Canada**Aug., 2019 – Feb., 2021****Wine Consultant**

- greet customers upon entry, offering assistance and guidance in selecting products;
- provide excellent customer service, answering inquiries about various alcoholic beverages and making personalized recommendations;
- operate cash registers, handle financial transactions, and ensure accurate processing of sales;
- monitor inventory levels, restock shelves, and organize merchandise displays;
- enforce age verification procedures to ensure compliance with government regulations;
- handle and resolve customer complaints, maintaining a positive and customer-centric approach;
- collaborate with team members to execute promotional displays and marketing initiatives.

Sprott Shaw College – Vancouver, Canada**May, 2019 – Aug., 2019****Summer Camp Leader**

- facilitate a safe and engaging environment for campers, ensuring their well-being and fostering a positive camp experience;
- contribute to the creative planning and execution of various programs, enhancing the overall camper experience;
- collaborate with a diverse team of counselors to coordinate daily activities, manage schedules, and address camper needs;
- communicate effectively with campers and parents, addressing concerns, and providing information about camp activities.

University of British Columbia – Canada**Sep., 2018 – Jan., 2019****Research Assistant**

- assist graduate students at UBC School of Health and Exercise Sciences in their research of type 2 diabetes and cellular inflammation;
- perform ELISA assays to analyze protein concentrations in biological samples;
- maintain laboratory equipment and keep track of adequate inventory;
- manage biological and chemical wastes, prepared reagents, and standards;
- obtain experience working in a team environment and develop research skills.

AWARDS & SCHOLARSHIPS**Dean's Honour List****2018**

- This designation recognizes exceptionally high academic achievements at UBC's Faculty of Science.

Deputy Vice-Chancellor Scholarship**2016 – 2018**

- This scholarship is awarded to students with high academic achievements.