

Stepan Zaiatc – Medical Lab Analyst / Data Analyst / Lab Technician

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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 specified time requirements.

EDUCATION

University of British Columbia, *Master of Data Science* 2023
University of British Columbia, *Bachelor of Science – Microbiology* 2019

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

- 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

- 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

- 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.

UBC Faculty of Medicine | Python | May, 2023 – Jun., 2023

Predictive analytics to support HLBC 8-1-1 and HEiDi triage (Capstone Project)

- develop automated pipeline for preprocessing and training machine learning models for nurse triage using data with over 300 features and 30,000 observations;
- build front- and back-end applications for the nurse and data scientists to interact with;

CAREER HISTORY

CardiAI Inc. – Delta, Canada Nov., 2021 – Sep., 2022

Medical Laboratory Technologist

- 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.

Biomedical Laboratory Analyst

- perform SARS-CoV-2 viral RNA extraction/purification and analyzing the presence/absence of viral RNA in patient's samples using RT-qPCR (polymerase chain reaction);
- set up and conduct microbiological tests and laboratory analyses in support of quality control in various products;
- carry out all required data analysis and processing (i.e., calculations, data review, data entry etc.);
- maintain and calibrate instrumentations;
- receive and ship supplies, assist in restocking of laboratory consumables/chemicals;
- decontaminate and dispose samples according to local regulations;
- maintain logs and records as required by quality documents;
- prepare and maintain analytical standards and reagents.

Laboratory Analyst

- microbiological testing of cannabis products for human pathogens following all FDA, U.S. Pharmacopeia and European Pharmacopoeia standards;
- quantitative and semi-quantitative analysis of cannabis products for bile-tolerant gram-negative bacteria, total yeast and mold count, total aerobic microbial count;
- prepare all media, buffer solutions and control cultures using certified stocks;
- biochemical and serological identification of bacterial *Salmonella spp.* and *S. aureus* species;
- participate in R&D processes for optimized cannabis microbial testing by novel qPCR-based testing;
- DNA extraction and analysis of bacterial DNA in cannabis products by real-time PCR detection;
- preparation and analysis of food and cannabis products for presence of selected pesticides and herbicides.

Agat Laboratories – Burnaby, Canada

Feb., 2020 – Mar., 2021

Microbiologist

- perform method validation for microbiological water and soil testing standard operating procedures and monthly environmental monitoring procedures;
- operation and calibration of pH meter, IDEXX Quanti-Tray Sealer, compound light microscope;
- detection of Total, Fecal, *E. coli* & *Enterococci spp.* of bacteria by enzyme-substrate technologies Colilert-18, Colisure & Enterolert;
- perform membrane filtration procedure and multiple tube fermentation for identification of Total, Fecal Coliforms, *E. coli* & *Salmonella spp.* of bacteria on various types of media;
- quantification of 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

- sample preparation techniques such as solid and aqueous digestion, extraction for Total Kjeldahl Nitrogen (TKN), total/dissolved mercury, strong/weak acid dissociable cyanide, chlorophyll A/B;
- preparation of 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 environmental samples of various matrices in LIMS while addressing any non-conformance issues, sample preservation and holding time;
- communicate any non-conformance issues between laboratory personnel and project managers.