

Stepan Zaiatc

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QUALIFICATIONS AND TECHNICAL SKILLS

Technical Skills

Data Visualization | Machine Learning | Deep Learning | Statistical Analysis | GitHub | Data Preprocessing | Data Cleaning | Data Modelling

Databases

SQL | PostgreSQL | MongoDB

Other Software & Tools

Tableau | TensorFlow | Sci-Kit Learn | CSS

Programming Languages

Python: NumPy | Pandas | Altair | Plotly | Dash | Matplotlib. **R:** dplyr | tidy | Shiny | ggplot | Stan

PROJECTS

suicideWatch Dashboard | R |

March, 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.

forxpy | Python & R |

February, 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.

Inferential study of heart disease | R |

December, 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.

UBC Faculty of Medicine | Python |

May, 2023 – June, 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;
- write comprehensive documentation for the pipeline and the dashboards;
- communicate findings and insights to diverse stakeholders with technical and non-technical backgrounds.

EDUCATION

- **University of British Columbia (Vancouver, Canada)** September, 2022 – June, 2023
Master of Data Science
- **University of British Columbia (Kelowna, Canada)** September, 2015 – May, 2019
Bachelor of Science – Microbiology

WORK EXPERIENCE

CardiAI Inc. – Delta, Canada

November, 2021 – September, 2022

Medical Laboratory Technologist

November, 2021 – September, 2022

- 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**March, 2021 – November, 2021*****Biomedical Laboratory Analyst*****March, 2021 – November, 2021**

- 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**March, 2021 – August, 2021**

- 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;
- preparation of all media, buffer solutions and control cultures using certified stocks;
- biochemical and serological identification of bacterial *Salmonella spp.* and *S. aureus* species;
- involved in R&D processes for optimized cannabis microbial testing by novel qPCR-based tests;
- DNA extraction and analysis of bacterial DNA in cannabis products by real-time PCR detection;
- preparation and quantification of environmental samples for volatile organic compounds, volatile hydrocarbons, trihalomethane and BTEX using Gas Chromatography – Mass Spectroscopy;
- preparation and analysis of food and cannabis products for presence of selected pesticides and herbicides.

Agat Laboratories – Burnaby, Canada**February, 2020 – March, 2021*****Microbiologist*****September, 2020 – March, 2021**

- 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**March, 2020 – March, 2021**

- 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**February, 2020 – March, 2020**

- 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.