# 'Bronte' Sihan Li, MLS(ASCP)<sup>CM</sup>

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Available: Jan 2023

## Education

#### NORTHEASTERN UNIVERSITY | SEATTLE | 2022 - Present

Khoury College of Computer Sciences (expected graduation 2024)

Candidate for a Master of Science in Computer Science GPA 4.0

Related Courses: Intensive Foundations of Computer Science, Discrete Structures, Objected Oriented Design, Data Structures and

## Algorithms, Foundations of AI, Algorithms (Graduate Level)

UNIVERSITY OF WASHINGTON | SEATTLE | 2012 - 2017

School of Medicine

Bachelor of Science in Medical Laboratory Science GPA 3.6

## **Technical Skills**

Biomedical	Biomedical diagnostics, Genetic sequencing technologies (Sanger, NGS, microarray), Healthcare regulations (CAP, CLIA, HIPPA, GCP), Electronic Medical Record Systems
Languages	Python, Java, C, R, SQL, Prolog, Bash
I ools and Frameworks	openAPI, matplotlib, PyTorch

## Experience

#### Software Engineer Intern | Infrastructure | Audere | Jun 2022 – Dec 2022

- Designed and implemented improvements in batch testing tools for evaluating computer vision models enabling product demos, centralized test data storage and analysis, with components including API endpoints, SQL database providers, and CLI tooling
- Performed various bug fixes and feature additions to computer vision service infrastructure

#### Senior Medical Laboratory Scientist | Molecular Genetics | Seattle Children's | Jun 2021 - Present

- Co-designed, built and maintained Next-generation sequencing data analysis pipeline in Python resulting in over 80% cost savings
- Improved laboratory database to support digitization of workflow by adding send-out testing and specimen quality tracking
- Designed and co-developed Tableau dashboard for testing performance metrics monitoring and result analysis
- Maintained and authored procedures and protocols for high complexity molecular testing

#### Clinical Laboratory Scientist | Microbiology | Seattle Children's | Jul 2017 – Jun 2021

- Co-validated and rolled-out COVID-19 PCR test supporting hospital-wide testing and surveillance
- Initiated team SDI (System for Daily Improvement) program with problem assessment and root cause analysis which led to a 30% increase in number of improvement ideas submitted and assessed
- Co-designed and developed ergonomic PCR plate capping tool that reduces manual stress and increases testing speed by 40%
- Created and led technical training sessions for molecular microbiology tests in response to influx of new staffing, which decreased reporting error rates

## Projects

## Human Functional MRI Exploratory Analysis on Visual Perception | Nov 2022 – Dec 2022

- Conducted exploratory analysis on BOLD5000 fMRI dataset by training RFC, SVM and MLP classifiers on sentiment and image stimuli labels and compared their performances, with highest accuracy of 0.8
- Analyzed feature importance using feature extraction and performed model tuning with grid search
- Assessed statistical significance of findings with permutation tests
- Visualized high-dimensional voxel data using t-SNE

## Genomic Variant Classification with Mutated Yeast Growth Data | Apr 2022 – May 2022

- Cleaned and mapped yeast growth data and variant classification labels using open-source genomic databases
- Trained and tuned Naïve Bayes classifier model for predicting pathogenicity of genetic variants achieving an accuracy of 0.96

## Activities

## Member, Laboratory Equity Diversity, and Inclusion Council | Seattle children's | 2021 - Present

Develop and manage EDI projects, SharePoint site development and content management, community outreach

## Awards & Acknowledgements

Seattle Children's Greenliight Innovation Award, Winner 2018 Seattle Children's David Fisher Award for Excellence in Safety, Nominee 2021 Joyce Behrens Endowed Scholarship in Medical Laboratory Science 2017 Robert Chang Foundation Scholarship 2012 – 2017