

Faith Princess Ikede

faithikede1@gmail.com • (249) 879-6482 • www.linkedin.com/in/faithikede

EDUCATION

Laurentian University, Sudbury, Ontario, Canada

Current PhD Student, Engineering Science

Research Interests include artificial intelligence with applications in healthcare, biology, and climate change

Saint Louis University (SLU), Saint Louis, MO

May 2024

Master of Science, Bioinformatics and Computational Biology

University of Wisconsin-Superior (UWS), Superior, WI

May 2019

Bachelor of Science, Majors: Biology, Computer Science

Minors: Chemistry, Mathematics

Graduated with Cum Laude Honours

Dean's List 2016, 2018, 2019

RELEVANT EXPERIENCES

Graduate Teaching Assistant

Laurentian University, Sudbury, ON

September 2025 – Present

- Evaluate assignments and technical projects for 59 undergraduate students, ensuring fair and consistent grading
- Deliver detailed, actionable feedback to enhance student performance and understanding
- Employ professional communication with students and support course coordination

Bioinformatics Research Analyst

Washington University in St Louis, St. Louis, MO

August 2024 – July 2025

- Analysed perturbation experiment data using Spotfire and provided actionable reports to the research team
- Evaluated and optimized YOLO-based models for organelle segmentation, performed functionality and accuracy tests, statistically compared performance against manual methods and alternative models
- Recommended strategies to improve YOLO models sensitivity and specificity based on evaluation results
- Developed image analysis pipelines to quantify organelles (e.g., mitochondria) in neurons
- Created detailed documentation and visualizations ensuring reproducible workflows and effective communication
- Validated outputs from SiDoLa-NS, a spatial omics CNN model, benchmarked against existing models, contributed to manuscript preparation, and generated publication-quality visualizations

Graduate Tutor - Bioinformatics

Volunteer, St. Louis, MO

January 2024 – May 2024

- Delivered one-on-one tutoring sessions to strengthen student understanding of core bioinformatics concepts
- Guided the student through practical applications of NCBI eDirect, phylogenetics, and sequence analysis using real-world datasets, improving student's analytical proficiency, and confidence in applied data analysis
- Supported student success by explaining complex principles and reinforcing learning through hands-on problem solving

Research Assistant

Saint Louis University, St. Louis, MO

January 2024 – May 2024

- Analysed bulk RNA-seq data in R using DESeq2, limma, and edgeR to identify differentially expressed genes and determined biological relevance of results
- Generated publication-ready visualizations and data summaries to explain the analysis and significance of results
- Delivered clear reports to the supervisor and external PI, facilitating research decision-making

Graduate Research Assistant

Saint Louis University, St. Louis, MO

August 2023 – May 2024

- Retrieved and processed gene sequences from NCBI using BLAST (BLASTP, TBLASTN) and eDirect (Bash-based API access)
- Conducted phylogenetic analyses of three genes across 30+ organisms, performing multiple sequence alignments and evolutionary inference
- Applied MEGA, PhyML, and Bayesian methods (MrBayes) to construct and validate phylogenetic trees
- Interpreted biological significance of results, documented workflows, and presented findings to technical and non-technical audiences

Computational Biology Intern

Adaptive Biotechnologies, Seattle, WA

June 2023 – August 2023

- Built reproducible R pipelines for statistical modelling, including Wilcoxon rank-sum tests, linear mixed-effects models, and regression analysis
- Designed custom data visualizations to effectively communicate results and support data-driven decision-making
- Led journal club discussions and presented key scientific insights to the computational biology team

- Collaborated with and received mentorship from senior computational biologists; contributed analyses currently in preparation for publication

Bioinformatics Course Tutor

Volunteer, St. Louis, MO

September 2022 – December 2022

- Selected by course instructor to serve as peer tutor while enrolled, supporting classmates' success in coursework
- Delivered one-on-one and group tutoring sessions on theoretical principles and technical applications
- Provided academic support through both virtual and in-person tutoring, adapting to diverse student needs
- Supported course objectives, created an inclusive learning environment that fostered technical confidence, and strengthened students' computational skills

Graduate Research Assistant

Saint Louis University, St. Louis, MO

August 2022 – May 2023

- Analysed single-cell RNA and ATAC sequencing datasets to extract biological insights and support ongoing projects
- Produced clear visualizations and summaries of results for presentation to the PI and doctoral researchers
- Enhanced the performance of the TSSr R package by optimizing file input methods and implementing multithreading
- Self-taught R programming and bioinformatics workflows, applying new skills to independently drive analyses and deliver results

Clinical Laboratory Technologist

LabCorp, St. Paul, MN

September 2019 – July 2022

- Operated and evaluated samples using LC-MS/MS, TOF-MS, and HPLC instruments for accurate clinical analysis
- Interpreted results assessed batch quality, and provided feedback to extraction technologists
- Performed liquid-liquid and solid phase extractions to prepare samples for chromatography analysis
- Conducted screening assays to detect drugs and biomarkers with accuracy and consistency
- Ensured compliance with privacy rules, good documentation practices and completed assigned tasks efficiently
- Trained and mentored junior technologists, demonstrating techniques and evaluating their performance to ensure quality standards

Research Assistant

University of Wisconsin-Superior, Superior, WI

September 2018 – May 2019

- Conducted functional experiments in a cancer research lab, including microinjection of zebrafish embryos to study genes linked to Rhabdomyosarcoma, and maintained zebrafish colonies
- Developed C# software with Git version control to enhance objectivity and efficiency in nuclei quantification from zebrafish embryo images
- Presented and demonstrated program to the Natural Sciences department and student audiences

User Experience Intern

Hello Tractor, Abuja, Nigeria

June 2018 – August 2018

- Designed and deployed 5 surveys to gather actionable feedback from tractor distribution companies, informing service improvements
- Created educational videos and brochures to effectively communicate product offerings and benefits to customers and farmers
- UI/UX reviewer for developers during the launch of the company's first web and mobile application

PUBLICATIONS

- Lina Mohammed Ali, Aldrin Kay Yuen Yim, Emanuel Gerbi, Thien Nguyen, Nicholas Tu, **Faith Ikede**, Remi Sampaleanu, Diana Grigore, Jason Waligorski, Colin Kremitzki, Liya Yuan, Wendy Dong, Robi Mitra, Jeff Milbrandt, William Buchser, **“Biophysical Simulation Enables Multi-Scale Segmentation and Atlas Mapping for Top-Down Spatial Omics of the Nervous System.”** bioRxiv, 2024.08.02.605366; doi: <https://doi.org/10.1101/2024.08.02.605366>

AWARDS

- **International Fee Waiver**, Laurentian University – Valued at \$15,000
- **Graduate Teaching Assistant**, Laurentian University – Valued at \$14,547
- **Graduate Research Assistantship Award**, Saint Louis University – Valued at \$23,000 per year
- **Global Graduate Award**, Saint Louis University – Valued at \$5,000
- **Non-Resident Tuition Waiver**, University of Wisconsin-Superior – Valued at \$6,000 per year