

# Mehlam Saifudeen

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## EDUCATION

### Case Western Reserve University

**Majors:** Systems Biology (BS) and Computer Science (BA) | **Minors:** Business Management and Chemistry

**GPA:** 3.74, Dean's High Honors List

**Relevant Coursework:** Bioinformatics, Dynamics of Biological Systems, Physiology, Genetics, Organic Chemistry, Data Structures, Algorithms, Database Systems, Artificial Intelligence, Full Stack Web Development, Statistics in R, Differential Equations, Discrete Math, Microeconomics, Macroeconomics

### United World College of the Atlantic

Davis United World Scholar

May 2024  
Cleveland, OH

Aug 2018 – May 2020  
Cardiff, Wales

## PROFESSIONAL EXPERIENCE

### Computer & Data Science Department at CWRU, Lead Teaching Assistant

- Lead weekly lab sessions for a group of 20 students along with office hours to assist students with their weekly coding assignments in Python.
- Create exams and grade projects and assignments for 150 students on finance using python, along with providing helpful feedback on the same.

Aug 2022 – Present  
Cleveland, OH

### Sanjay Rajagopalan Lab, CWRU, Undergraduate Research Assistant

- Conducted research on the impact of PM2.5 levels on Alzheimer's mortality in the USA
- Utilized Python and R scripts to gather and analyze data from government sources to produce plot maps
- Applied Linear Regression to build a Machine Learning Algorithm for forecasting Alzheimer's rates at different PM2.5 levels.

Jan 2023 – May 2023  
Cleveland, OH

### Center for RNA Science and Therapeutics, CWRU, Opentrons OT2 - Software Developer Intern

- Implementation of designed lab protocols such as Next-Generation Sequencing among others using Python and JavaScript on the Opentrons OT-2 robot.
- Debugging existing protocols available on Github to ensure correct working and implementation of the protocols on the robot.
- This project makes it easier for individuals to increase the efficiency of work by allowing the robot to carry out long experiments and minimize human errors in the procedure.

May 2022 – Jan 2022  
Cleveland, OH

### Institute for Systems Biology, Data Science Intern

- Full stack development of a database application using R shiny to enable users to navigate and query results of tissue-specific genes in gene set collections for pathway enrichment analysis.
- Designed scientific figures using R, refactored code, conducted data analysis in R and presented the results of the project on a poster.
- This database application will allow researchers across the world to better analyze their pathway enrichment analysis results by taking out the tissue bias.
- Submitted the database and the draft of the manuscript on the results of tissue biases in pathway enrichment analysis for publication in Nature Scientific Reports.

Jun 2022 – Aug 2022  
Seattle, WA

## SKILLS

### Programming Languages

• Java • Python • SQL • C# • R • R Shiny • JavaScript • HTML • CSS • React.js • Wolfram Mathematica

### Research and Wet Lab

• Gel Electrophoresis • DNA Purification • In-Vitro transcription • Cryo-em • PCR • Western Blotting • Scientific Writing

## LEADERSHIP EXPERIENCE AND ACTIVITIES

### North-East Ohio Student Venture Fund, VC Analyst

- Evaluating and performing due diligence on North East Ohio startups looking to raise seed capital.

Jan 2023 – Present  
Cleveland, OH

### Systems Biology Society, CWRU, Upperclassmen Representative

- Interactions with students majoring in Computer Science or Systems Biology. Learn about the jobs and research in the field through events, lectures, and industry visits with professionals

May 2023 – Present  
Cleveland, OH

### Undergraduate Student Government, CWRU, College of Arts and Sciences Representative

- Discuss and implement initiatives involving student life, academics, and club activities using college funds acquired from the activities fee of undergraduate students.

Aug 2021 – Present  
Cleveland, OH

## CERTIFICATIONS

Data Science with R • ML - Hands on Python and R in Data Science • Data Structures and Algorithms in Python • The Complete JavaScript Course • MongoDB - The Complete Developer's Guide • R Shiny for beginners, Certifications from Udemy

Advanced Open Water Diver, Deep Diver, Underwater Naturalist Diver, and Enriched Air (Nitrox) Diver Specialties