

Ishya Casukhela

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SUMMARY

Self-motivated Mathematics student with experience creating and analyzing differential equation models in R and MATLAB. Additional experience in data wrangling, regression analysis and prediction modeling in R and developing end-to-end analysis pipelines utilizing supervised/unsupervised models and communicating model results within the context of the problem.

EDUCATION

The Ohio State University

Columbus, OH

Bachelor of Science in Mathematics, Specialization Biology, Minor in Spanish

Graduation: December 2021

SKILLS

- Python, R/RStudio, MATLAB, and C++
- Web-Development: HTML, CSS (Bootstrap/Materialize Framework), JavaScript (jQuery/Node.js/Express), SQL (MySQL/Workbench)
- Fluent in English and Spanish

PROFESSIONAL EXPERIENCE

Machiraju Laboratory – Digital Pathology Laboratory

January 2021-Present

Undergraduate Student Researcher

- Split sarcoma tissue image data into training, validation, and testing data sets to automatically identify severity of soft tissue sarcomas
- Extended local severity prediction to predict whole tissue severity
- [Abstract in progress] **Deep learning approach for grade prediction of Soft Tissue Sarcoma using diagnostically relevant regions**

Athena Infonomics

Remote

Data Analytics Intern

May 2020-August 2020

- Analyzed data regarding the presence of waterborne illness in Mumbai, India
- Studied ordinary least squares regression and linear mixed-effects model theory
- Cleaned datasets and constructed maps of Mumbai, India using R
- Developed literature review and data sets on waterborne illnesses based on precipitation, infrastructure access, and climate changes

The Ohio State University at Lima: Math Learning Center

Lima, OH

Math and Statistics Tutor/Grader

August 2017-August 2018

- Assisted students in understanding various math concepts ranging from pre-college math to Calculus II
- Assessed students' knowledge and led them to understanding concepts for themselves
- Worked with other tutors and professors to provide effective tutoring for various learning styles

Full-Stack Developer Course – The Ohio State University

April 2021 – October 2021

- **Boredom Activity Selector** – Static HTML, Materialize CSS, and JavaScript - User can be given a random activity given their location's weather and number of people participating: https://casukhelai.github.io/weather_activity_selector/
- **Random Password Generator** – JavaScript - User can choose their password length and choose criteria for their password: https://casukhelai.github.io/random_password/
- **Workday Scheduler** – Static HTML, Bootstrap, and JavaScript - User can keep track of their day and save their inputs if they close out of the tab: https://casukhelai.github.io/workday_scheduler/

ACADEMIC EXPERIENCE

Introduction to Mathematical Biology – Final Project

Spring 2020

- Studied a peer-reviewed article, conducted, and presented a thorough critical review on the authors' differential equation model

Quantitative Neuroscience – Final Project

Spring 2020

- Built a set of differential equations to model interaction between cerebellar Golgi cells and cerebellar granule cells in XPPAUT