

Ali Hussain

949-338-3461 ~ ali25311@outlook.com

Website ~ ali25311.github.io ~ [LinkedIn](#) ~ <https://www.linkedin.com/in/ali-hussain-csuf/>

EDUCATION

- 08/2020 - Present **B.S. Computer Science**, California State University of Fullerton
Cumulative GPA: 3.33
- 08/2016 - 05/2020 **Saddleback College**
Completed lower division classes for transfer

SKILLS

| Languages | Operating Systems/Technologies | Relevant Completed Coursework |
|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">• C/C++• Python• HTML/CSS• Javascript | <ul style="list-style-type: none">• Windows• Linux/Unix• Trello & Jira (Agile/Scrum)• Git & GitHub | <ul style="list-style-type: none">• Algorithm Engineering• Software Testing• Operating System Concepts• Software Engineering |

EXPERIENCE

- 02/2022 - Current **Research Assistant**, Cal State Fullerton - Fullerton, CA
- Formulated and designed a hybrid model (using Python & Mesa) consisting of agent-based simulations and equation-based modeling to simulate Lassa Fever accurately and efficiently.
 - Developing and quantifying different scenarios and constraints on the model to simulate different outbreak prevention/control methods to note in our findings.
 - Writing a research paper and research poster to present conclusions and findings at TAPIA Conference 2022 on the best environmental intervention strategies for the control of lassa fever outbreaks.
- 06/2022 - 08/2022 **Research Mentor/Teaching Assistant**, Cal State Fullerton ASC - Fullerton, CA
- Mentoring and assisting transfer students with their independent research for an 8-week summer program to allow students to gain first hand experience into scientific research.
 - Assisted grading a variety of student assignments throughout the duration for Professor Akwafuo's summer Computer Networking class.
 - Taught and mentored on the basics of Python, object-oriented programming, SEIR modeling and the Mesa framework for Python.

PROJECTS

- 04/2022 - 06/2022 **Agent-Based Lassa Fever Model**, (Python and Mesa Framework)
- Agent-Based Model designed, developed and tested using the Python framework MESA which serves the purpose of modeling Lassa Fever so it can be given a proper spatiotemporal analysis of different control measures for outbreaks.
 - Uses equation-based formulas within the model/code to accurately portray the different groups of agents within the model.
 - Modularized the code into separate/different agent classes for a more accessible approach to implement future features and scenarios.
- 09/2021 - 11/2021 **Who Would Win?**, (JS, JSX markup, HTML5/CSS3)
- Online interactive web application that lets users vote on various match-ups versus their favorite characters from numerous sources of entertainment and media.
 - Matchups are randomly selected from a created Google Firestore database that gives functionality to the application.
 - Developed the interface utilizing pure HTML5 and CSS3, while Next.js (a React and Node-based framework) was used for providing the application logic and real-time rendering.