

# Ali Hussain

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## 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"><li>• C/C++</li><li>• Python</li><li>• HTML/CSS</li><li>• Javascript</li></ul>	<ul style="list-style-type: none"><li>• Windows</li><li>• Linux/Unix</li><li>• Trello &amp; Jira (Agile/Scrum)</li><li>• Git &amp; GitHub</li></ul>	<ul style="list-style-type: none"><li>• Algorithm Engineering</li><li>• Software Testing</li><li>• Operating System Concepts</li><li>• Software Engineering</li></ul>

## EXPERIENCE

- 06/2022 - 08/2022 **Research Mentor/Teaching Assistant**, Cal State Fullerton ASC - Fullerton, CA
- Mentoring and assisting transfer students with their independent research as part of 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.
- 02/2022 - 06/2022 **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.

## PROJECTS

- 04/2022 - Present **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.