Ali Hussain

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Mission Viejo, California

EDUCATION

08/2020 - 05/2023 (Expected) **Bachelor of Science, Computer Science**
California State University of Fullerton

SKILLS

Languages
- C/C++
- Python
- HTML/CSS
- Javascript
- SQL

Operating Systems/Technologies
- Windows
- Linux/Unix
- Visual Studio & Code
- Trello & Jira (Agile/Scrum)
- Git & GitHub

Relevant Completed Coursework
- Algorithm Engineering
- Software Testing
- Operating System Concepts
- Software Engineering
- Web Front-End Development

EXPERIENCE

06/2022 - Present **Peer Research Mentor,** 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.
- Managing a team of students in a dynamic and collaborative research environment while also providing training and support.
- 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 consisting of agent-based simulations and equation-based modeling to simulate Lassa Fever using the Python framework Mesa.
- 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 our conclusion 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 (infected, deceased, isolated, etc.)
- 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 our Google Firestore database that gives functionality to the application.