

# MAXIMUS LEWIS

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## HIGHLIGHTS OF QUALIFICATIONS

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- Proficiency in multiple modern programming languages such as Python, Java, Go, and JavaScript
- Experienced with both front-end and back-end development
- Proven leadership, interpersonal communication, and collaboration skills gained from working on a yearlong research project and through coursework/projects
- Familiar with Agile Scrum software development methodology

## EDUCATION

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### Bachelor of Science in Computer Science

Lewis University, Romeoville, IL

Honors: *magna cum laude*

Minor: Mathematics

May 2023

GPA: 3.8/4.0

## TECHNICAL SKILLS

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**LANGUAGES:** JavaScript, Python, Java, Go, SQL, C, Assembly, NetLogo

**WEB:** JavaScript, React, HTML, CSS, Node.js, Express.js, Tailwind CSS, Bootstrap 5, Sass, Vue.js, Svelte, PHP, MongoDB, Microsoft Azure, Google Firebase

**HARDWARE/SYSTEMS:** macOS, Windows, Android, iOS, ChromeOS, Unix, Ubuntu

**APPLICATIONS:** Visual Studio Code, macOS Terminal, Git, GitHub, IntelliJ, Android Studio, Eclipse, Microsoft Office, Google Docs Editors, WinSCP, PuTTY

## RELEVANT COURSEWORK

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|----------------------------------|-------------------------------------|
| • Algorithms and Data Structures | • Operating Systems                 |
| • Object-Oriented Programming    | • Mobile Application Development    |
| • Software Engineering           | • Applied Programming Languages     |
| • Database Systems               | • Web and Distributed Programming   |
| • Programming Languages          | • Software Systems Capstone Project |

## PROJECTS

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**QuizMaster** - <https://quizmaster-c66a2.web.app/>: Software Systems Capstone Project at Lewis University

- Developed a web application, as part of an Agile Scrum software development team, that allows users to take quizzes on a variety of different topics
- Written in React, and Tailwind CSS
- Using Google Firebase for hosting, authentication, Firestore NoSQL database, and serverless Google Cloud Functions

### In Theaters

- Movie information and ticket searching mobile application
- Android app is written in Java that allows users to see new movies that are in theaters
- Utilized the IMDb API to get information about the movies
- Allows users to view movies, view more information, and search the web for tickets

## RESEARCH AND PRESENTATIONS

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### An Agent-Based Model of Environmental Transmission of *Clostridioides difficile* in Healthcare Settings

- Advisors: Dr. Brittany Stephenson, and Dr. Cara Sulyok
- An agent-based model written in NetLogo that simulates the environment of *C. difficile* infection within a hospital ward
- The model includes touch surfaces, healthcare workers, and patients within which the infection can be spread

### Presentations

- Lewis, M. (2022, August). An Agent-Based Model of Environmental Transmission of *C. difficile* in Healthcare Settings. Undergraduate poster session presented at the Mathematical Association of America's 2022 MathFest in Philadelphia, PA.
- Lewis, M. Mahrat, L. (2022, November). An Agent-Based Model of Environmental Transmission of *Clostridioides difficile* in Healthcare Settings. Poster session presented at the Symposium on Biomathematics and Ecology Education and Research at Illinois State University.

- Lewis, M. Mahrat, L. (2023, March). Utilizing an Agent-Based Model to Explore the Transmission of *Clostridioides difficile* in Healthcare Settings and Evaluate Control Strategies. Parallel session presented at the 2023 Annual Meeting of the Illinois Section of the Mathematical Association of America at the College of DuPage.
- Lewis, M. Mahrat, L. (2023, April). Utilizing an Agent-Based Model to Explore the Transmission of *Clostridioides difficile* in Healthcare Settings and Evaluate Control Strategies. Concurrent session presented at the annual Lewis University Celebration of Scholarship at Lewis University.

## WORK EXPERIENCE

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Will County School District 92

Lockport, IL

*Building Custodian*

August 2018 – Present

- Ensure building cleanliness per district standards
- Operate machinery to achieve various cleaning tasks around the building and grounds
- Maintain school security by regulating entering/exiting public and staff
- Collaborate with staff to establish well-running class and school events
- Perform assigned tasks effectively with minimal supervision

Lewis University

Romeoville, IL

*Engineering, Computing, and Mathematical Sciences Tutor*

August 2022 – May 2023

- Aided students in Computer Science and Mathematics
- Administered tests when needed
- Collaborated with professors and other tutors to better aid students

Lewis University

Romeoville, IL

*Student Researcher*

June 2022 – August 2022

- Conducted a literature search on the topic of *C. difficile*
- Compiled notes on past *C. difficile* mathematical models
- Developed a different agent-based model for the spread of *C. difficile*
- Collaborated with a research partner, and faculty mentors on the direction and specific implementation of certain aspects of the agent-based model

## HONORS AND AWARDS

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- Outstanding Student Employee of the ECAMS Department for the 2022 – 2023 school year
- Dr. Stephany Schlachter Excellence in Undergraduate Scholarship Award Finalist
  - Top 4 research projects at Lewis University.
  - In recognition of “An Agent-Based Model of Environmental Transmission of *Clostridioides difficile* in Healthcare Settings.”
- Outstanding Undergraduate Research (The Illinois Section of the Mathematical Association of America)
  - In recognition of “An Agent-Based Model of Environmental Transmission of *Clostridioides difficile* in Healthcare Settings.”
- The Janet L. Andersen Award for Undergraduate Research in Mathematical or Computational Biology (The Special Interest Group of the Mathematical Association of America on Mathematical and Computational Biology)
  - In recognition of “An Agent-Based Model of Environmental Transmission of *Clostridioides difficile* in Healthcare Settings.”
- 2022 MAA MathFest Undergraduate Student Poster Session Outstanding Poster (The Mathematical Association of America)
  - In recognition of “An Agent-Based Model of Environmental Transmission of *Clostridioides difficile* in Healthcare Settings.”
- Recipient, Schmidt Family Foundation Grant for academic achievement, 2020 – 2023
- Dean’s List, all four years
  - In recognition of having a 3.5 GPA and above.