

Logan Lucas

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Education

University of Illinois Chicago – BS in Computer Science, GPA: 3.9

Expected May 2026

Skills

Languages: Java, C++, Python, C, CSS, SQL

Technologies: JUnit5, JavaFX, FXML, SQLite3

Development Tools: Git, Docker, Maven, GDB, Valgrind, Makefile, Figma

Experience

Computer Science Tutor – Chicago, IL

Aug 2024 – Present

- Provided personalized weekly tutoring sessions remotely to a computer science student at the University of Illinois Urbana-Champaign, boosting their academic performance by 2 letter grades
- Developed tailored learning materials to increase understanding of fundamental Computer Science concepts
- Incorporated coding exercises and online resources to enhance engagement and promote learning through practice

Projects

Three Card Poker – Java, CSS

github.com/loganlucas13/three-card-poker

- Created a user friendly three card poker game in Java using JavaFX, FXML, and CSS with a focus on intuitive design
- Applied Figma to plan and implement key design choices, resulting in a polished final product
- Collaborated with a fellow developer to generate innovative ideas and enhance communication skills

Mapping Application – C++

github.com/loganlucas13/open-street-maps

- Developed a comprehensive pathfinding tool in C++ to find optimized routes between university buildings
- Reduced runtime by more than 25% by optimizing Dijkstra's algorithm implementation and adjacency list integration
- Retrieved navigation data from the OpenStreetMap database to enhance mapping and route optimization

Public Transit Database Application – Python, SQL

github.com/loganlucas13/CTA-lobbyist-app

- Developed a Python application to search for lobbyist information within the Chicago Transit Authority database
- Integrated the SQLite3 database API to optimize data retrieval and display, ensuring a seamless user experience
- Increased program modularity through implementing a three-tiered architecture, enabling effortless expansion

Language Relationship Detection – C

github.com/loganlucas13/word-ladder-finder

- Created a word-linking application in C using pattern analysis to highlight patterns found in the English language
- Enhanced optimization by implementing linked lists, significantly increasing efficiency of word ladder creation
- Developed comprehensive test cases to ensure program reliability and robustness across a wide variety of inputs

Optimized Data Structure Library – Java

github.com/loganlucas13/java-hashmap-and-queue

- Designed a generic data structure library in Java, prioritizing efficiency and user-friendly design
- Achieved over 90% test coverage by creating comprehensive unit and integration tests using the JUnit5 framework
- Improved user-friendliness by implementing the iterator design pattern, enabling efficient traversal of data structures

Extracurriculars

Association of Computing Machinery, Member

Aug 2024 – Present

- Actively participated in meetings and group events, fostering collaboration across organization members

Korean Music Club, Event Coordinator

Aug 2022 – Oct 2023

- Organized group events for club members, fostering engagement and strengthening bonds within the organization