Logan Lucas

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Education

University of Illinois Chicago Expected May 2026
BS in Computer Science GPA: 3.92/4.00

Skills

Languages: Python, TypeScript, JavaScript, Go, Java, C++, C, SQL, SQLite3, CSS, HTML
Technologies: React, Git, Docker, Flask, Tailwind CSS, Firebase, Cloudflare Workers, Maven, JUnit 5, JavaFX, NumPy

Projects

Social Media-Driven Stock Sentiment Analyzer – React, TypeScript, Go, Firebase github.com/loganlucas13/broker-x

- Implemented web-scraping of social media websites in Go to gather and analyze current stock sentiment, enabling users to make informed buy or sell decisions based on real-time data
- Integrated Firebase authentication to securely store user metadata on the cloud, allowing users to efficiently access their previous search history and bookmark their favorite stocks
- Designed a suite of reusable React components with Tailwind CSS to display data to end users, improving codebase modularity and accelerating development time of data visualization pages by 20%
- Incorporated the React Router library to manage navigation, resulting in seamless transitions between views

WebTuner – Python, JavaScript, Flask github.com/loganlucas13/web-tuner

- Developed an accurate and lightweight guitar tuner using Python, Flask, and JavaScript to provide users with direct access from any browser, enhancing accessibility and convenience for musicians
- Analyzed input audio with NumPy to leverage Fourier transforms for frequency identification, achieving 95% accuracy
- Connected to user audio devices and integrated real-time visualization using JavaScript's Media Devices API, providing users with immediate visual feedback based on input

Three Card Poker – Java github.com/loganlucas13/three-card-poker

- Built a networked three card poker game in Java using JavaFX and CSS by implementing a centralized server-dealer architecture, enabling multiple users to play individual games against a single dealer
- Reduced computing overhead by 20% within client programs by migrating backend hand evaluation calculations to the server, enhancing the smoothness of the client experience
- Achieved over 90% test coverage using the JUnit 5 testing framework, ensuring high code quality and reliability

Campus Navigation Assistant – C++ github.com/loganlucas13/campus-nav

- Integrated Dijkstra's algorithm in a C++ pathfinding application to find optimized routes between university buildings, decreasing average travel time on campus for users
- Reduced computation runtime by more than 25% by optimizing algorithm and adjacency list implementations, resulting in increased responsiveness with a decrease in loading times

Public Transit Database Explorer – Python, SQLite3 github.com/loganlucas13/CTA-lobbyist-explorer

- Achieved efficient data retrieval from the Chicago Transit Authority database by leveraging Python and SQL queries, ensuring that users have access to current and accurate data with implemented filtering
- Optimized data retrieval by implementing the SQLite3 Python API, decreasing application runtime by more than 15%

Experience

Computer Science Tutor – Remote 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