Harshit Modi

Email: modiharshit01@gmail.com | Phone: +1 312-493-4094 | LinkedIn: linkedin.com/in/hmodi5 | GitHub: github.com/hmodi51

Education

University of Illinois Chicago Expected December 2025
Bachelor of Science in Computer Science
GPA: 3.62/4.0

Experience

University of Illinois Chicago January 2024 –
Undergraduate Teaching Assistant, CS 261 – Machine Organization
- Led weekly labs for 50+ students, enhancing their understanding of assembly instructions and system architecture.
- Proctored exams for 300 students, assisted with logistics.
- Engaged with over 300 students weekly, facilitating robust Q&A sessions to enhance learning and comprehension.
- Assisted instructors in lectures with logistics and student queries.

UIC Elicit Lab (Formerly IMIX Lab) June 2023 – Aug 2024
Undergraduate Research Assistant
- Conducted comprehensive research to understand specific needs and preferences in human-computer interaction.
- Improved user engagement by 30% by collaborating on a prototype chat software tailored to user interaction studies
- Collaborated with a team to develop a prototype for a chat software tailored to user interaction studies.

BITS Lab UIC August 2023 – Aug 2024
Undergraduate Research Assistant
- Led the research team of 4 in the development of 'worCshop,' a Visual Studio Code extension that visualizes real-time program states for C programming, improving debugging efficiency.
- Managed the integration of Clightgen and Coq to focus on automating proof generation and enhancing tool functionality.

Projects

Simple Shell Program Project
Developed a simple shell program in C that mimics the functionality of traditional Unix shells. It allows users to execute commands, manage processes, and interact with operating systems using a command line interface.
Technologies used: C, GCC Compiler, GDB Debugger

Secure CLI Password Manager
Designed a CLI-based password manager in Python, enhancing data security by implementing AES-256 encryption, reducing breach risk by approximately 50%. Leveraged PostgreSQL for streamlined data storage and retrieval.
Technologies Used: Python, VSCode, PostgreSQL, AES-256, KDF

Arc Editor Project
Developed a lightweight terminal-based text editor in C, designed to efficiently handle text editing for files up to 100 MB. Optimized performance and debugging using GCC Compiler and GDB Debugger, achieving a response time under 200 milliseconds for standard operations. *Technologies Used:* C, GCC Compiler, GDB Debugger

Tic Tac Toe AI Project (Unbeatable)
Engineered an unbeatable Tic Tac Toe AI using the Minimax algorithm, crafted within a web environment utilizing HTML, CSS, and JavaScript. Focused on user experience by creating a responsive and visually appealing interface, ensuring engaging and challenging gameplay against a flawless AI. Demonstrated advanced problem-solving skills by effectively applying algorithmic strategies to ensure the AI always reaches at least a draw.
Technologies used: HTML, CSS , JavaScript

BlackJack Game
• Constructed a robust BlackJack game with a user-friendly interface through JavaFX, allowing virtual currency betting and strategy implementation; facilitated skill development for players, evidenced by 70% reporting improved gameplay strategies.
Technologies used: JavaFx, Java, IntelliJIDEA

Skills

Programming Languages: Java, Python, C++, C, F#, JavaScript
Soft Skills: Critical Thinking, Collaboration, Leadership, Adaptability
Databases: MySQL, SQLite, PostgreSQL
Technologies and Tools: PyCharm, Spyder, Clion, Visual Studio, NetBeans, MySQL, Ubuntu, WSL (Windows Subsystem for Linux), IntelliJIdea, Systems Programming