KIRTAN PATEL

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Innovative problem-solver and aspiring software engineer passionate about **scalable systems, cloud computing, and cybersecurity**. Experienced in debugging low-level C/C++ code, optimizing algorithms, and developing full-stack and hardware-integrated applications. Strong communicator with proven leadership as a **Teaching Assistant** supporting 250+ students.

EDUCATION

University of Illinois at Chicago (UIC), IL   **Dean's List (2 semesters)** |**GPA: 3.6/4.0**
B.S. in Computer Science (Software Engineering Concentration) |Expected May 2026
Relevant Coursework: Data Structures & Algorithms, Operating Systems, x86-64 Assembly, SQL, Software Design, Programming Language Design,Computer Design , Languages and Automata,Programming for Engineers (TA role), Computer Architecture

TECHNICAL SKILLS

- **Languages:** C, C++, Java, Python, JavaScript, SQL, Bash, PowerShell, Go , F#,
- **Development:** OOP, RESTful APIs, Debugging (GDB, PowerShell), Agile, Memory Management
- **Databases & Cloud:** SQL, NoSQL, MySQL, MongoDB, PostgreSQL, AWS, Google Cloud
- **Tools & Platforms:** Git, GitHub, VS Code, IntelliJ, Postman, Jira, Figma
- **Security & Systems:** Reverse Engineering, Cryptography, Performance Optimization

EXPERIENCE

University of Illinois at Chicago – College of Engineering
Teaching Assistant | CS 109 (MATLAB), CS 107 (C Programming) | Aug 2024 – Present

- Led labs and office hours for 250+ students, improving programming proficiency and assignment performance.
- Guided students in C/C++ debugging, pointers, and memory management as well as MATLAB design for engineering projects.
- Provided constructive feedback on assignments/exams, reinforcing algorithmic thinking and efficient coding practices.
- Acted as a mentor by clarifying complex system concepts and fostering collaborative problem solving.

PROJECTS

Software Engineering Group Project – CS 440 (Tiger Conservation Platform)

- Led backend development for a digital conservation database platform.
- Designed SQL schema to track habitats, sightings, and conservation reports.
- Implemented REST endpoints to support data entry and retrieval.

Weather Application (Java FX , APIs)

- Implemented multi scene navigation with seamless transitions between current weather , 3 day weather for both day and night and tourist information, Enhanced UI/UX with city specific backgrounds and integrated location based fun facts and tourist attraction data to provide guide for tourists
- Built a multi-scene weather app with API integration, enhancing UX through dynamic city backgrounds and location-based insights.

Connect-Four Networked Game – CS 342 *(Spring 2024)*

- Designed client-server multiplayer game using JavaFX for GUI and multi-threaded Java server.
- Implemented real-time chat, user authentication, and board synchronization.

Smart Interactive Table (Hardware/Software Integration Project) *(Spring 2024)*

- Developed interactive IoT table with 3 Arduinos, integrating sensors, RFID, and motors; delivered fully functional prototype showcased at UIC..
- Developed embedded software for real-time sensor data collection and feedback (LCD + LED ring).
- Coordinated team of 3 to deliver fully functional prototype for showcase.

EXTRACURRICULARS, CERTIFICATIONS & ACHIEVEMENTS

- Cybersecurity Club – CTF Competitor (Aug 2023 – Present): Reverse Engineering & Cryptography challenges
- SparkHacks Hackathon (Feb 2025): Built innovative team-based software project
- AWS Certified Cloud Practitioner (2024)
- Google IT Automation with Python – Coursera (2024)