Faaizuddin Farooqui

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Education

University of Illinois – Chicago Expected Graduation: May 2025
Bachelor of Science in Computer Science, Minor in Mathematics *GPA: 4.0/4.0*

Experience

Undergraduate Teaching Assistant Jan. 2023 – Present
University of Illinois Chicago *Part-time*

- Spearhead lab sessions for 30 students, introducing new approaches to teaching that improve student learning outcomes and engagement
- Collaborate with the professor and fellow teaching assistants to develop evidence-based pedagogical approaches
- Provide one-on-one guidance and clarification on introductory computer science concepts during scheduled Office Hours for students, improving student's confidence in topics by over 30%

Projects

Blaze Alert: Weather Web Application for University Students | *HTML, CSS, JS, API Integration*

- Collaborated with a team of four to develop a personalized, campus-specific weather monitoring web application during a hackathon
- Crafted front-end components using HTML, CSS, and Javascript, ensuring a visually appealing and user-friendly interface
- Integrated RESTful APIs for weather data retrieval and parsing of API responses

Open Street Maps - Dijkstra's Algorithm | *C++*

- Developed an algorithm that inputs a map of UIC's campus and navigates two people at two different buildings to a meeting spot
- Information containing building locations, footways between buildings, as well as the Dijkstra's graph algorithm, were all used to assist the development of this program

Custom Binary Search Tree-Based Priority Queue | *C++*

- Engineered a versatile BST-based priority queue for efficient element management based on priority, with applications such as hospital patient queues
- Implemented core operations including enqueue, dequeue, and peek while preserving element order for equal priorities

Music Library Search Engine | *C++*

- Delivered a music library search engine allowing users to locate desired albums, artists, and songs quickly
- Leveraged map and set data structures to facilitate album title matching based on user queries and implemented core library functionalities such as filtering and searching
- Utilized set operations (union, intersection, and difference) to effectively manage search results, ensuring high performance and responsiveness even with large music libraries

Guess Wordle Word | *C*

- Designed an AI-inspired program to solve the "Wordle" game in 15 attempts or less, utilizing adaptive filtering and flags to refine guesses iteratively
- Implemented heuristic scoring based on letter frequency to optimize guess generation, maximizing the probability of identifying the correct word

Technical Skills

Languages: Java, Python, C/C++, HTML/CSS, Javascript
Developer and Prototyping Tools: Git, VS Code, Figma, FigJam
Frameworks: React, Next.js, Tailwind CSS

Relevant Coursework

Data Structures, Programming Practicum (C), Discrete Mathematics, Machine Organization, Theory of Computation, Linear Algebra, Calculus 3, AP Computer Science A (Java), AP Computer Science Principles, AP Calculus BC