Sarah Athar

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EDUCATION

University of Illinois at Chicago (UIC)   **Chicago, IL**
Bachelor of Science in Computer Science, Software Engineering | Minor in Economics   *Expected May 2023*
GPA: 4.0/4.0; Dean's List for All Semesters
Relevant Coursework: Data Structures, Machine Organization, Software Design, Languages and Automaton

WORK EXPERIENCE

University of Illinois at Chicago   **Chicago, IL**
Undergraduate Research Scholar   *June 2021 – Present*
- Assisted Dr. Peihan Miao with her research interests in Cryptography and Security, including Secure Multiparty Computation and Applied Cryptography.
- Research Project captured supporting data deletion in privacy-preserving machine learning via Linear Regression techniques.

KPMG   **Chicago, IL**
Advisory Sprintern in Data, Analytics & AI   *May 2021 – June 2021*
- Worked with a team to develop a solution to use different technological strategies to obfuscate client sensitive documents for training and broader uses within the firm.
- Applied Natural Language Processing Tools (NLP) from both IBM Watson and SpaCy, to come to a conclusive on which tool was faster and had greater accuracy during Document Obfuscation.

University of Illinois at Chicago   **Chicago, IL**
Teaching Assistant for Data Structures Course   *January 2021 – June 2021*
- Assisted in conducting Labs and Oral Exam Sessions.
- Held weekly Office Hours to help Students in debugging their code, explaining Key Concepts such as Search/Sort Algorithms, Memory Mapping, Abstractions, Data Structures, and Unit Testing.

Chicago Breakthrough Tech   **Chicago, IL**
Teaching Assistant for Winter Guild Program   *January 2021*
- Assisted in Teaching Introductory Computer Science concepts to College Women in a week-long remote program.
- Assisted throughout Design process, brainstorming different issues with food insecurity and helped with effective teamwork.

University of Illinois at Chicago   **Chicago, IL**
Mobile Application Developer for GPIP Research Program   *July 2020 - August 2020*
- Assisted Professor Ugo Buy in his research to help develop a cross-platform Application for Android and IOS systems using Expo and React-Native.

PROJECTS

15 Puzzle, Software Design, UIC
- JavaFX Program allowing users to solve the 15 Puzzle, either themselves or by using the AI Algorithm, A*, to help assist them by calculating the 10 next moves.

Huffman Encoding, Data Structures, UIC
- An application that Compressed and Decompressed Text Files using the Huffman Encoding algorithm for Proper Memory Management. A custom-made priorityqueue was implemented that used Binary Search Trees and Linked Lists to handle duplicate priorities.

Autocomplete, Data Structures, UIC
- Implementation of an Abstract Class for AutocompleteList using vector and sorting algorithms, and then a program that uses the custom-made class to suggest the most popular completions based off an incomplete input word.

Vigenere Cipher, Program Design II, UIC
- Used Pair Programming to develop a Program that performs Word-Lookup, Encodes and Decodes Text using Vigenere Cipher Algorithm, and Auto-Decodes provided text file using best-possible keyword for Decoding.

SKILLS & INTERESTS

- **COMPUTER:** C++, C, Java, Python, JavaScript, React-Native, Python with Turtle Graphics, CSS, HTML
- **INTERESTS:** Member of Women in Computer Science, Member of Society of Women Engineers
- **LANGUAGE:** Native Proficiency in English, Bilingual Proficiency in Hindi, Limited Proficiency in Arabic
- **PUBLIC SPEAKING:** School Model United Nations, Debate Competitions, Presentations