Mohammed Faroun

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Education

University of Illinois at Chicago   **December 2024**
Bachelor of Science in Information and Decision Sciences
Minor in Computer Science

William Rainey Harper College   **December 2022**
Associate of Science

Work Experience

Headstarter Ai - Software Engineering Fellow   **July 2024 - Current**
- Participated in bi-weekly virtual hackathons and in-person meetups, fostering teamwork and networking with industry professionals.
- Completed five team-based AI projects using OpenAI, NextJS, Firebase, AWS, and ReactJS. Delivered weekly submissions, enhancing problem-solving and collaborative skills
- Engaged in interview prep, resume reviews, and AI coaching calls. Received feedback from software engineers to improve technical and communication skills
- Led a final project aimed at gaining 1,000 user accounts or $1,000 in revenue, culminating in a presentation to a panel of engineers
- Built connections through events with industry leaders, enhancing community engagement and professional development

CodePath - Software Engineer Intern   **May 2024 - Current**
- Analyzed and reviewed session materials to support the instruction of complex technical concepts.
- Enhanced technical expertise in data structures and algorithms through intensive Python programming.
- Designed, implemented, and tested algorithms in Python to address real-world problems, deepening knowledge of advanced data structures.
- Conducted comprehensive code reviews to ensure adherence to best practices and uphold high-quality code standards.
- Collaborated in weekly planning meetings to identify key focus areas and set objectives.

Projects

Movie Database Project | *Java, SQL, Java Swing*
- Developed a Java-based Movie Rental System, mirroring the functionality of Redbox, for streamlined movie rental processes |
- Implemented an intuitive graphical user interface (GUI) using Java Swing, facilitating easy interaction with the software
- Utilized SQLite Database to efficiently manage and track movie checkouts, including the maintenance of a detailed checkout history
- Engineered the system to handle multiple data tables, ensuring accurate tracking of checked-out movies and the number of checkouts

UIC Open Maps Project | *C++*
- Developed a pathfinding application for UIC campus navigation, utilizing graph algorithms to calculate optimal routes between &emspbuildings.
- Integrated real-world campus geography into a graph structure with nodes representing locations, edges denoting paths, and weights capturing distances.
- Implemented Dijkstra's algorithm for accurate and efficient shortest path determination.
- Used TinyXML2 for parsing OpenStreetMap data, ensuring up-to-date and accurate geographical information.

Search Engine Project | *C++*
- Employed maps and sets to manage and organize search results through various union and difference algorithms.
- Implemented methods to cleanse search queries stored in a set, matching them to URLs in a database where each URL is linked with a keyword from the set
- Enabled advanced search functionalities using '+' for inclusive searches and '-' to exclude terms, refining search results effectively.

Server and Client Messaging App | *Java, JavaFX*
- Developed a client-server application using Java and JavaFX for real-time communication across a network.
- Designed and built a user-friendly client GUI in JavaFX that enables users to send messages, receive updates, and view online users dynamically
- Created server-side logic to manage user connections, disconnections, and message broadcasting to all connected clients
- Utilized advanced Java features like threads, sockets, input/output streams, and JavaFX UI components for a robust and responsive application

Technical Skills

Frameworks: Flutter, Bootstrap, Django, Flask, React
Languages: SQL, HTML, C++, Java, JavaScript, Python, C, CSS, R, Dart, VBA
Other Skills: Android Studio, Visual Studio Code, Excel, Word, Powerpoint, Access, AWS, Eclipse, IntelliJ
Libraries: pandas, NumPy, Matplotlib, Scikit