

REBECCA ZHU

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EDUCATION

Illinois Institute of Technology

January 2022 - December 2024

Bachelor's, Computer Science

GPA: 3.5

- Introduction to Algorithm; Data Structure and Algorithms; Database Organization; Discrete Math; Statistics and Probability; Software Engineering; System Programming; Computer Organization and Assembly Language; Wireless Networks and Performances; Data Communication; Machine Learning

PROFESSIONAL EXPERIENCE

Wilbur Wright College - City Colleges of Chicago

Chicago, IL, USA

Research Assistant

June 2021 - June 2022

- Investigated a new system for how mentors should be matched based on analysis conducted by a research-based survey
- Applied new findings from research to develop a matching algorithm that did improve the mentor/mentee matching experience
- Tested the matching algorithm by developing a test-friendly mobile app using flutter and firebase
- Coordinated Principal Investigator Dr. Espiritu with opportunity to co-author peer-reviewed publications by collecting and analyzing data, while maintaining accurate records, and representing methodology, application, and preliminary results on ASEE national conference student showcase

PROJECTS & OUTSIDE EXPERIENCE

Meta - Above and Beyond Computer Science Program

Remote

Apprentice

August 2022 - December 2022

- Completed a 10-week comprehensive workshop series with Facebook software engineers, deepening understanding of algorithms and data structures
- Facilitated learning of industry-standard interview methodologies and best practices, substantially enriching professional skill set.
- Acquired hands-on experience and practical insights on prevalent technical interview subjects, enhancing proficiency in algorithms

Target Database Inventory System

Chicago, IL, USA

Developer

January 2023 - May 2023

- Led Java backend development to ensure a robust and scalable application architecture, contributing to improved system reliability and performance
- Utilized SQL Workbench for database interfacing and administration, enhancing system usability and streamlining data management processes
- Contributed to a user-friendly system design, focusing on simplifying inventory tracking and data management tasks, resulting in 15% improvement in operational efficiency
- Developed SQL code to optimize database management and query efficiency using MySQL, resulting in a % increase in system performance

Wi-Fi Environment Analysis Using Wireshark 802.11 Traces

Chicago, IL, USA

Project Owner

August 2023 - December 2024

- Conducted detailed Wi-Fi environment analysis using Wireshark 802.11 traces at multiple locations, including Illinois Institute of Technology's MTCC building, a residential home, and multiple commercial coffee shops
- Performed Wireshark captures during peak and off-peak hours, accompanied by environmental assessments, to analyze traffic patterns, signal strength, and performance metrics
- Utilized the findings to develop an interactive Wi-Fi strength map with Google Maps API, leading to insights and recommendations for network improvements in each unique environment
- Collaborated with a Network Analyzer app and conducted SpeedTest measurements for network performance assessment
- Applied knowledge of Wireshark, 802.11 data, and network analysis to derive actionable insights and recommendations for improving Wi-Fi network performance

SKILLS & INTERESTS

Programming Language : C/C++, Python, SQL, Assembly

Version Control System: Git

Machine Learning: Scikit-Learn, Pandas, NumPy, Matplotlib

Database Management: MySQL, PostgreSQL

Tools and IDEs: Visual Studio, Xcode, MySQL Workbench, Jupyter, Eclipse, Excel/Numbers/Sheets

Software Development Life Cycles: Agile Methodology, Waterfall Methodology

Soft Skills: Problem Solving, Effective Communication, Teamwork, Emotional Intelligence, Leadership

Interests: Yoga, Weightlifting, Running, Chess