Al-kesna Foster

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Education

University at Buffalo, The State University of New York | **Anticipated: May 2024**
Bachelor of Science, Computer Science | *Buffalo, NY*

Work Experience

UB Dept. of Computer Science and Engineering | **January 2024 – Present**
Distributed Systems Teaching Assistant | *Buffalo, NY*
- Aided students in troubleshooting distributed systems programming assignments in Go
- Explained distributed system concepts relating to failure detection, message-passing, concurrency, and more
- Collaborated with course instructors and fellow teaching assistants to deliver effective academic instruction

UB Dept. of Computer Science and Engineering | **September 2022 – Present**
Systems Programming Teaching Assistant | *Buffalo, NY*
- Held regular office hours, assisting students in troubleshooting programming assignments in C
- Instructed weekly labs, providing support to over **700 students**, reinforcing course concepts
- Communicated with course instructors and fellow teaching assistants to deliver effective labs and exams

Meta | **June 2022 – August 2022**
Meta University Data Science Intern | *Menlo Park, CA*
- Collaborated with a team to complete a project focused on increasing the engagement of over **1 million young adults** on Facebook videos
- Analyzed large datasets using SQL, Pandas, and statistical methods
- Delivered recommendations by leveraging compelling visualizations and impactful insights from comprehensive data analysis

The Research Foundation for SUNY | **May 2021 – Present**
Research Assistant | *Buffalo, NY*
- Fine-tuned a large language model to detect political stance from over **200 million tweets**
- Utilized natural language processing tools and qualitative research to increase the retention rate of freshmen in computer science
- Employed quantitative analysis and linear regression to analyze the effects of services on foster youth and identify racial biases within the foster care system

Projects

Organizational Tool Web App | *PHP, JavaScript, HTML, CSS, GitHub* | **November 2023**
- Developed a dynamic calendar for event management, file upload/download functionality, and an integrated to-do list
- Leveraged React, JavaScript, and CSS for the frontend, while implementing PHP scripts to interact with the MySQL database on the backend
- Collaborated on the creation of wireframes using Figma, implementing a user-friendly interface

RafTM | *Go* | **April 2023**
- Implemented a simplified version of Raft consensus algorithm to manage consensus in a distributed server cluster
- Developed leader elections using failure detection, client interactions, and log management functionalities, ensuring fail-stop resilience
- Utilized Go to create UDP-based communication protocols for servers and clients to pass messages

Music Recommendation System | *Python, Pandas* | **November 2022**
- Developed a system using Python that generates accurate music recommendations based on a given list of liked songs
- Implemented user-based collaborative filtering and cosine similarity algorithms to analyze user preferences
- Performed an exploratory analysis using Pandas, presenting valuable insights through visualization techniques

Technical Skills

Languages: C, Go, Java, JavaScript, Python, Scala, SQL
Technologies/Frameworks: Apache Spark, Figma, Flask, GitHub, Jupyter Notebook, Pandas, React

Extracurricular

National Society of Black Engineers – *Member* | **September 2021 – Present**
Louis Stokes Minority Alliance Participation – *Member* | **May 2021 – Present**
Chess Club – *Member* | **September 2020 – Present**