




AL-KESNA FOSTER

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Education

University at Buffalo, The State University of New York

May 2024

Bachelor of Science, Computer Science GPA: 3.4

Buffalo, NY

Work Experience

University at Buffalo Department of Computer Science and Engineering **September 2021 – May 2024**

Undergraduate Teaching Assistant

Buffalo, NY

- Held office hours aiding **300+ students** in programming assignments in C and Go
- Led weekly labs and recitations teaching concepts such as pointers, process anatomy, synchronization, concurrency, failure detection, and distributed data structures
- Collaborated with faculty and teaching assistants to organize effective academic instruction

The Research Foundation for SUNY

May 2021 – May 2024

Undergraduate Research Assistant

Buffalo, NY

- Trained a large language model on **200+ million tweets** using TensorFlow and Apache Spark, to detect political stances to understand why people exit the democratic process
- Conducted qualitative analysis using natural language processing on text responses from freshmen computer science students to increase their retention rate in the major
- Researched and presented the effects of employment services on the rate of full-time employment of foster youth via Pandas and linear regressions

Meta

June 2022 – August 2022

Meta University Data Science Intern

Menlo Park, CA

- Analyzed Facebook video data using Python, Pandas, and statistical methods to increase the engagement of **1 million+ young adults** on Facebook videos
- Managed and queried big data using SQL to obtain relevant datasets for analysis
- Wrote a business document and created compelling visualizations to present recommendations based on my analysis

Projects

Calendar Web Application | *PHP, React, JavaScript, HTML, CSS, Git*

December 2023

- Designed a full-stack calendar web application to create an organizational tool for students with an integrated to-do list and file storage system using the scrum methodology
- Developed the app utilizing React, JavaScript, HTML, and CSS for the frontend, PHP for the backend, and Git for version control
- Wrote tests for and implemented features such as registration, adding friends, forgot-password, and search bar

Consensus Algorithm | *Go*

April 2023

- Implemented the Raft consensus algorithm in Go to maintain consensus in a distributed server cluster
- Developed leader elections and consistent state machines to ensure a fault-tolerant system
- Utilized UDP-based communication protocols to pass messages between client and servers

Music Recommendation System | *Python, Pandas*

November 2022

- Created a music recommendation system in Python using collaborative filtering
- Filtered and preprocessed data to ensure compatibility with the algorithm and storage constraints
- Conducted an exploratory data analysis using Pandas to get insights into the top artists and genres of the dataset

Technical Skills

Languages: C, Go, JavaScript, Python, Scala, SQL

Technologies/Frameworks: Apache Spark, CSS, Git, HTML, Pandas, React, TensorFlow

Awards/Extracurricular

Undergraduate Research Award – *Recipient*

May 2024

National Society of Black Engineers – *Member*

September 2021 – Present

Louis Stokes Minority Alliance Participation – *Member*

May 2021 – Present

Chess Club – *Member*

September 2020 – Present