Mohammad Haider

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Education

Virginia Tech - Bachelor of Science

Major in **Statistics**

Minor in **Computer Science**

Expected Graduation
Dec 2020

Languages and Technologies

C#

Java

Python

R

Git

Terminal

PowerShell

LaTeX

Interests

Scalability of Services

System Efficiency and Optimization

Data Visualization

Coursework

Data Structures and Algorithms

Competitive Programming

Computer Architecture

Combinatorics & Graph Theory

Experimental Design

Professional Experience

Software Engineering Intern **Microsoft Corporation; May '18 - Aug '18**

- Motivated by concerns of user privacy within tenants, and concerns of bullying in school use cases
- Developed an admin toggle in SharePoint to allow for document chat to be toggled
- Worked with REST endpoints, developed a mental model for flow of information, and integrated into a complex pre-existing system, used primarily C#

Software Engineering Intern **Microsoft Corporation; May '17 - Aug '17**

- Ported the Most Recently Used (MRU) documents feature to a new architecture, improving read/write performance
- Utilized caching to reduce SQL queries, to allow for better performance and reliability, used primarily C#

Projects

Anilist Python API Wrapper **(In Progress)**

- Developing a Python wrapper for the Anilist GraphQL API
- Intended to allow easier querying by creating a Python library for executing lengthy but similar GraphQL queries as function calls
- Use the requests and json Python packages to allow for querying of the GraphQL database, storing results in json, and returning them as strings
- Data includes but is not limited to: ratings, genres, titles, release period, and staff

Python Music Visualizer **(In Progress)**

- Using Python OpenGL libraries in conjunction with NumPy to create real time music visualizations
- Focused on taking microphone input and transforming it into frequency data using fourier transforms, then influencing surface shapes with frequency data, and updating them in real time, locally, with PyOpenGL and PyQTGraph

BibleBot

- Used requests and BeautifulSoup to scrape a pre-existing webpage, allowing the user to retreive a random bible verse
- Used DiscordPy and the async Python decorator to allow for processes to wait for other information

Discord Community Management

- Created and grew a resource centric discord community for a popular MMORPG.
- Scaled to over 9500 members
- Currently maintaining resources that are relevant and up-to-date with in-game updates

ACM-ICPC Programming Team

- Data Structure and Algorithm related problem solving
- Done on a weekly basis through the Virginia Tech ICPC Programming Team