Megan McAdams

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Education

University of North Texas Aug. 2019 – Dec. 2023
Bachelor of Science in Computer Science (GPA: 3.65) *Denton, TX*

Experience

Software Engineering Intern June 2023 – Aug. 2023
Bank of America *Plano, TX*

- Spearheaded testing and deployment of 5 machine learning models for ATM cash usage prediction; recognized with an award for a top-tier intern project
- Collaborated within an intern team to deliver innovative solutions across 4 distinct projects
- Successfully transitioned 3 applications to the production environment for end-user functionality
- Developed a Python-based automation tool to streamline file transfers from production to UAT, enhancing operational efficiency
- Refactored a critical program by reviewing and optimizing over 100 imported modules; achieved a 2-minute reduction in runtime for a program executed hundreds of times daily
- Pioneered a Python program to retrieve, format, and display market data and risk to traders on a daily basis, significantly decreasing data access wait times for traders

Billing Operations Student Assistant Mar. 2021 – June 2023
UNT Student Accounting *Denton, TX*

- Enhanced the precision of tuition and fee validation across 40,000 accounts by engineering a Python program, significantly reducing validation time from a minimum of one week to 30 minutes
- Analyzed extensive email data, creating insightful reports through the use of spreadsheets and formulae
- Developed an intuitive application enabling students to preemptively assess installment-based payment plan costs, providing them with financial clarity prior to enrollment

Projects

Wikipedia Clone | *Python, Flask, JavaScript, HTML/CSS* June 2023 – Present

- Developed a dynamic web application reminiscent of Wikipedia using Python Flask and Google Firestore
- Encompasses account creation, session management, content editing, permission assignment, and seamless page navigation

Balanced Binary Search Tree Dictionary | *Java* Feb. 2023 - Mar. 2023

- Engineered a balanced binary search tree dictionary in Java for efficient storage and retrieval of reptile information
- Achieved O(log n) time complexity for search operations, enhancing the data retrieval speed
- Implemented essential functions including find, add, remove, successor, and predecessor within the binary search tree structure

Tuition Validation | *C++, Python* June 2021 – June 2023

- Orchestrated the precise validation of over half a billion dollars in university revenue across academic periods
- Executed complex charge allocation logic using interpreted pseudocode, ensuring accurate student charges
- Streamlined the computation process, requiring less than 10 seconds to calculate charges for over 40,000 accounts
- Scripted in C++ originally and subsequently refactored in Python for improved maintainability and flexibility

Leadership and Awards

President and Founder of UNT Computer Science Club Feb. 2021 – Present
President of UNT Women in Computing Aug. 2021 – Jan. 2022
Outstanding Student Employee of the Year May 2022
Outstanding Junior in Computer Science Apr. 2022

Technical Skills

Languages: Java, Python, C/C++, SQL, TypeScript, JavaScript, HTML/CSS
Frameworks: React, Node.js, Flask
Developer Tools: Jinja, Git, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, Pivot Tables
Libraries: pandas, NumPy, Matplotlib