# Megan McAdams

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## Education

**University of North Texas** Aug. 2019 – Dec. 2023
*Bachelor of Science in Computer Science (GPA: 3.7/4.0)* *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 an automation tool in Python to streamline file transfers from production to UAT
- 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 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

Member of Rewriting the Code Aug. 2023 – Present
Member of AnitaB.org Sep. 2022 – Present
Outstanding Student Employee of the Year May 2022
Outstanding Junior in Computer Science Apr. 2022
President and Founder of UNT Computer Science Club Feb. 2021 – Present
President of UNT Women in Computing Aug. 2021 – Jan. 2022

## Technical Skills

**Languages**: Java, Python, C/C++, SQL, TypeScript, JavaScript, HTML/CSS
**Frameworks**: React, Flask
**Developer Tools**: Jinja, Git, Pivot Tables
**Libraries**: pandas, NumPy, Matplotlib