

# Megan McAdams

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## EDUCATION

### University of North Texas

*Bachelor of Science in Computer Science, Minor in Spanish*

Aug. 2019 – Dec. 2023

Denton, TX

## EXPERIENCE

### Software Engineering Intern

*Bank of America*

June 2023 – Aug. 2023

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

*UNT Student Accounting*

Mar. 2021 – June 2023

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

President of UNT Women in Computing

Outstanding Student Employee of the Year

Outstanding Junior in Computer Science

Feb. 2021 – Present

Aug. 2021 – Jan. 2022

May 2022

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