David McLain
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EDUCATION

University of Arizona Tucson, Arizona
Bachelor of Science, Computer Science May 2021 – Present
Minor in Mathematics
- GPA: 3.6 / 4.0
- ASEMS NSF Grant Scholarship

Pima Community College Tucson, Arizona
Pre-Engineering August 2019 – May 2021

TECHNICAL SKILLS

Programming Languages: Java; Python; C#; C; MIPS; SQL; Bash; HTML; CSS
Operating Systems: Linux; Unix; Windows
Software and Libraries: Git; Vim; Lucene; Pandas; NumPy; Make

PROJECTS

Mini Watson – Spring 2023
- Led a team of 5 developers in the creation of a software application that acted as a simplified version of IBM's Watson Question Answering machine.
- Developed the application using Java, and integrated OpenNLP and Lucene frameworks to implement a bag of words and probabilistic model for searching indexed Wikipedia documents.
- Coordinated with team members to design and implement an algorithm that indexed relevant Wikipedia documents and extracted necessary information using natural language processing techniques.

Chess Game – Fall 2022
- Managed a team of 4 developers in the development of a GUI-based chess application using Java's Swing and AWT libraries, which included features such as online gameplay, saving and loading games, and a competitive mode.
- Implemented agile development methodologies to ensure efficient and flexible project management, including regular team meetings, task prioritization, and continuous integration and deployment.
- Utilized object-oriented design patterns such as the Model-View-Controller (MVC) pattern to develop a modular, scalable, and user-friendly interface using Java's Swing and AWT libraries for a GUI-based chess application.

Sorting Algorithm Visualizer – Winter 2022
- Designed and implemented a sorting algorithm visualizer using Javascript, HTML, and CSS to showcase the functionality of merge sort, quicksort, and heapsort algorithms.
- Used HTML and CSS to create an engaging and user-friendly interface that displayed the array of numbers and highlighted the current step in the sorting process.
- Demonstrated proficiency in software development, algorithm design, and web development by delivering a high-quality project that received positive feedback from users.

RELEVANT EXPERIENCE

University of Arizona, Department of Computer Science – Winter 2022 – Present
Undergraduate Teaching Assistant
- Serving as an undergraduate teaching assistant for Discrete Mathematics in Computer Science, providing academic support to students by hosting supplemental instruction sessions and hosting weekly office hours.
- Hosting weekly supplemental instruction sessions to provide students with additional opportunities to practice course concepts, ask questions, and receive personalized feedback.
- Collaborated with the course instructor and other teaching assistants to ensure consistency in teaching style, grading policies, and course content.

RELEVANT COURSEWORK

Object-Oriented Programming and Design
Cloud Computing
Database Design
Data Structures and Algorithms
Computer Organization
Systems Programming & UNIX