Austin Tran

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EDUCATION

The University of Texas at Austin, Austin, TX August 2022 - May 2026
BS Computer Science 3.44/4.0
Relevant Coursework: Operating Systems(CS439), Computer Architecture(CS429), Data Structures(CS314), Linear Algebra(M340), Probability (M362K), Software Engineering (CS373)
Leadership: **Treasurer** - *Computer Science Transfer Society*. Host meeting and info sessions to educate students on the process of transferring successfully into CS at UT Austin.
Organizations:
UT Computer Science Transfer Society : Communicating to other CS transferring students and gaining networking skills, by attending workshops, academic, and social events hosted by the organization.
Machine Learning and Data Science Club : Actively participated in weekly team meetings, which included machine learning workshops. These workshops provided valuable insights into implementing machine learning and data science techniques in real-world applications.

SKILLS

Languages: Java, Python, C, C++, Javascript, HTML, CSS
Technologies/Frameworks: Node.js, Express.js, React.js, Linux, Arduino, Git, AutoCAD, Inventor, Revit, Excel
Certificates: Machine Learning with Python *(IBM), Autodesk AutoCAD*

WORK EXPERIENCE

Catalytic Services Co. , Houston, Texas May 2024 - August 2024
Software Engineering Intern

- Led the complete overhaul of the company website using the MERN stack, resulting in a more modern and responsive design.
- Leveraged MongoDB to effectively manage and streamline contact page interactions, improving data accuracy and user experience.
- Engineered robust server-side solutions with Node.js, enhancing website performance, scalability, and security.

UT Computer Science Transfer Society, Austin, Texas January 2024 - Present
Lead Web Developer

- Led the web development team responsible for maintaining and enhancing the organization's website.
- Built the website using HTML, CSS, and Bootstrap, incorporating JavaScript for dynamic functionality.
- Worked on integrating a backend system to enable features like an emailing system and event management.

PROJECTS

Multi-Threaded Bellman-Ford Algorithm (C++):

- Implemented the sequential Bellman-Ford algorithm on a large input graph and measured its running time as a baseline.
- Developed parallel versions using different synchronization methods: mutex (coarse-grain and fine-grain locking), spin-locks, and compare-and-swap for atomic updates.
- Compared speedups of parallel algorithms on large graphs (rmat15 and road-NY) using 1, 2, 4, 8, and 16 threads.

Hand Controlled Volume Control (Python):

- Developed a volume control application using OpenCV and computer vision techniques.
- Implemented hand tracking to adjust system volume based on hand gestures and finger positions.
- Utilized MediaPipe for detecting hand landmarks and interpreting gestures for volume control.

FitFolio: Gym Encyclopedia (JavaScript, CSS, React):

- Developed a comprehensive React web application, FitFolio, serving as a centralized repository for gym enthusiasts to access a vast database of exercises sourced from ExerciseDB.
- Integrated the YouTube API to enrich user experience by embedding instructional exercise videos directly within the app, providing users with visual guidance for each exercise.
- Engineered a sophisticated sorting and searching system, empowering users to efficiently filter exercises based on equipment and muscle groups, facilitating targeted workout planning and customization.

Huffman Encoder/Decoder (Java):

- Developed a robust implementation of Huffman Coding algorithm in Java, demonstrating a deep understanding of data compression techniques. Utilized the algorithm to efficiently encode and decode diverse file types
- This encoder/decoder could encode and decode various files, such as png, jpg and txt files.