

Tran Anh Khoa Huynh

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EDUCATION

University of Texas, Erik Jonsson School of Engineering and Computer Science
Bachelor of Science in Computer Science, GPA: 3.73

Expected Graduation: December 2024
Dallas, TX

Dallas College
Associate of Science, GPA: 3.9

Graduation: December 2022
Dallas, TX

SKILLS

- **Programming Languages:** Assembly, C, C++, Java, Python, Prolog
- **Operating Systems:** Windows, Linux.
- **Others:** Microsoft Office/Word/Excel/Outlook/PowerPoint, Google Workspace.
- **Languages:** English and Vietnamese.

PROJECTS

Exploring Multiple Processes and IPC on OS - C++ Program

March 2024

- Developed a multi-process operating system simulation, employing fork() and IPC via pipes for process communication.
- Implemented interrupt handling with a three-signal system, ensuring system stability and responsiveness.
- Optimized stack operations for efficient memory management, demonstrating strong algorithmic skills.
- Integrated system calls manage user and kernel modes, enforcing access restrictions, preventing unauthorized actions, and enhancing system stability while safeguarding sensitive resources.

Binary Search Tree Implementation - Java Program

October 2023

- Developed a Binary Search Tree (BST) with efficient data retrieval and storage capabilities, employing tree traversal algorithms for sorted tree visualization.
- Implemented optimized algorithms for key BST operations, including insertion, deletion, and search, while creating dynamic nodes to enable real-time updates to the tree's content, showcasing strong algorithmic problem-solving skills.
- Expanded the basic BST functionality by adding advanced features such as counting nodes, checking for a full tree, comparing tree structures, determining tree equality, creating copies, generating mirror images, and executing tree rotations.

Pipeline-Based Arithmetic Expression Evaluator - C Program

April 2023

- Developed a versatile C program utilizing a pipeline-based approach to evaluate arithmetic expressions, supporting operators such as (+), (-), (*), and (/), and employing a multi-process architecture for enhanced efficiency and parallelism.
- Implemented file I/O operations to read arithmetic expressions from external sources and display results on standard output, while establishing efficient inter-process communication using pipes for seamless data transfer and result sharing between program components.

Networked Multiplayer Game Implementation - C Program

April 2023

- Created both Word Guessing (Hang Man) and Number Guessing games where clients connected to the server to participate in guessing challenges and offered feedback on each guess.
- Developed server and client applications in C using socket programming for seamless network communication over TCP/IP.
- Ensured real-time feedback to players, maintaining data integrity, security, and efficient network communication between the server and clients.

Tic-Tac-Toe - MISP Program

March 2023 – April 2023

- Designed and implemented game logic algorithms, including win condition checks, turn management, random move selections, and dynamic AI opponent generation, showcasing robust problem-solving abilities and promoting a user-friendly gaming experience.
- Demonstrated proficiency in managing function calls and utilizing the stack to save and restore return addresses, enhance code modularity, and optimize execution efficiency.

CERTIFICATIONS & LICENSES

- **Google Cybersecurity Professional Certificate** | Google
- **Amazon Web Services Cloud Practitioner Certificate** | Amazon
- **Career Essentials in Data Analysis by Microsoft and LinkedIn** | LinkedIn & Microsoft
- **Career Essentials in Cybersecurity by Microsoft and LinkedIn** | LinkedIn & Microsoft

Expected: June 2024

April 2024

February 2024

February 2024

AWARDS & HONORS

- **Phi Theta Kappa Academic Excellence Scholarship** | Phi Theta Kappa Honor Society - University of Texas at Dallas
- **Comet Transfer Academic Excellence Scholarship** | GPA: 3.9 - University of Texas at Dallas
- **State Farm STEM Scholarship** | Dallas College Foundation
- **Muller Scholarship** | Portland Community College Foundation Foundation
- **J.K.G. Scholarship** | Portland Community College Foundation Foundation

January 2023

January 2023

June 2022

July 2021

July 2020