Khang Tran

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EDUCATION

University of Florida   May 2026
Bachelor of Science in Computer Science   GPA: 3.84 / 4.00
Relevant Coursework: Data Structures and Algorithms, Machine Learning Engineering, Operating Systems, Programming Language Concepts, Info and Database Systems, Discrete Structures

TECHNICAL SKILLS

Languages: Python, C++, HTML/CSS, JavaScript, Java, ARM Assembly
Frameworks/Libraries: React, Flask, wxWidgets, PyGame, SFML
Developer Tools: Git, Jira, Linux, MongoDB, Docker, GCC, GNU Make, VS Code.

PROJECTS

VocalSphere | Python, Flask, JavaScript, React, MongoDB, RESTful API   Dec 2024
- Spearheaded a team of four in designing and developing **Vocal Sphere**, an audio-first social media platform, adhering to AGILE SCRUM methodologies to ensure efficient project delivery.
- Handled **JWT authentication** during account creation and the posting feature, handling full-stack responsibilities with a **Python Flask backend**, **React JavaScript frontend**, and **MongoDB database**.
- Developed a **RESTful API** with **Flask** for seamless communication between backend and frontend
- Facilitated SCRUM sprints and coordinated tasks among team members with **Jira** to achieve iterative development milestones.

Social Network Analyzer | C++, wxWidgets   Dec 2023
- Directed a team of three to develop a graph analysis app that uncovers hidden connections among 130,000 Facebook pages using **BFS** and **Dijkstra's algorithms**.
- Optimized **Dijkstra's algorithm** using priority queues to traverse 130,000 Facebook page nodes in **<2 seconds**.
- Engineered an interactive UI with **wxWidgets** to visualize network graph connections.

Minesweeper Clone | C++, SFML   Aug 2023
- Developed a fully functional **Minesweeper game** using **C++** and the **SFML library**, featuring a **graphical interface**, a **timer**, **leaderboards**, and a **debug mode** for enhanced gameplay experimentation.
- Leveraged **SFML** for rendering the game grid, handling user input, and managing event-driven gameplay interactions.
- Designed and implemented core game logic, including **procedural grid generation**, **randomized mine placement**, and comprehensive handling of **win/loss conditions**.

Sudoku Clone | Python, PyGame   Dec 2022
- Led a team of four in creating a dynamic **Sudoku game** with **random puzzle generation** for adjustable difficulty levels.
- Designed and implemented a **user-friendly UI** using the **PyGame library**, allowing players to interact via mouse and keyboard, with support for **draft input** to refine strategies.

INVOLVEMENT

Committee Member at UF Society of Asian Scientists and Engineers (SASE)   Sep 2023 - Dec 2023
- Organized a field day event with a team of 8 for 60 participants.
- Designed and managed new activities and games, ensuring alignment with budgetary constraints.