# NHAN DOAN

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#### **EDUCATION**

## **University of California San Diego**

Math & Computer Science

• GPA: 3.82 / 4.00

Expected graduation: June 2027

- Relevant Coursework: Data Structures, Algorithms, System Programming and Software Tools, Component & Design Techniques for Digital Systems, Principles of UX/UI Design.
- Technical Skills: Python (3yrs), JavaScript (1yrs), Java (1yrs), Git, MATLAB, Latex (basic), Swift, React Native

## **PROJECT**

#### **Creative Image Manipulation with Python**

Sep - Dec 2023

- Engineered a dynamic image manipulation application with 4 core transformations (brightness, color swapping, flip, segmentation) to generate custom collages
- Designed intuitive processing logic that balances performance with visual quality, ensuring smooth operation even with high-resolution inputs
- Implemented a modular architecture for easy feature expansion, demonstrating scalable design thinking

## **Text-Based Battleship Game in Python**

*Apr – May 2024* 

- Developed a complete turn-based game system with interactive board rendering, ship placement validation, and real-time gameplay feedback
- Architected a state management system using 2D arrays to track game progress, showcasing structured data handling
- Optimized input processing and board updates for responsiveness, reflecting attention to user experience fundamentals

## Maze Solver using Stacks and Queues with Java

Mar 2024

- Developed a Java-based maze solver utilizing Depth-First Search (DFS) and Breadth-First Search (BFS) algorithms for deterministic pathfinding
- Implemented a path reconstruction algorithm to retrieve the shortest route within a 2D maze using stack and queue worklists
- Conducted automated correctness validation using JUnit test cases covering multiple edge cases and maze complexities

## **EXPERIENCE**

### I.VALUE, Vietnam

Negotiation Intern

Dec 2023 – Mid Jan 2024

• Successfully initiated and managed a team of 7 individuals in Vietnam, achieving a significant outreach of 30 potential clients in advising on digital transformation within client organizations

#### **ACTIVITIES/LEADERSHIP**

#### **Vietnam Stem Society Platform**

Leader of Human Resources

Apr 2022 – Mar 2023

- Collaborated with industry experts to design and deliver 4 high-impact workshops, educating participants on cutting-edge topics including Machine Learning, Financial Technology
- Organized and facilitated monthly workshops for an average of 80 participants for skill support development and networking opportunities

#### **VEX Robotic Clubs Competition**

Assistant of Co-Founder

Feb 2022 – Apr 2023

- Designed and programmed robotic models using modular blocks, C++, and Python, integrating hardware and software to create functional prototypes for testing and demonstration purposes
- Oversaw the assembly of mechanical components, ensuring precision and quality