

# Nguyen Huynh Viet Thong

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## EDUCATION

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- **High School for the Gifted – VNUHCM**

*High School Diploma*

HCM City, Vietnam

2018 — 2021

- **University of Science – VNUHCM**

*Bachelor of Science in Computer Science; GPA: 3.52*

HCM City, Vietnam

Aug. 2021 — Sept. 2025

## RESEARCH EXPERIENCE

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- **Bachelor's Thesis**

*A Single-Frame Visual–Semantic Framework for Efficient Human Activity Recognition*

- **Keyframe Extraction:** Designed a single-sample HAR framework that selects one action-discriminative keyframe per video using an optimized frame-selection model to reduce computational cost while preserving representational quality.
- **Multimodal Feature Extraction:** Generated semantic text descriptions using the Recognize Anything Model (RAM) and encoded both visual and textual features with CLIP. Implemented weighted multimodal fusion with an internal search algorithm to optimize modality weights for SVM-based classification.

## PROJECTS

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- **Dietarium:** A web-based diet-tracking platform where I defined system requirements, planned development timelines, coordinated team workflows, and managed risks to deliver a functional and maintainable application.
- **Algorithmic Trading:** Explored a dual-strategy trading algorithm combining mean reversion and momentum for the VN30F1M futures market. Implemented margin handling, transaction cost modeling, and performance evaluation including Sharpe ratio and drawdown.
- **C-Dimension:** A multi-platform 3D puzzle game built in Unity. Designed levels, implemented gameplay mechanics, integrated physics interactions, developed UI/UX, and coordinated multi-scene workflows to ensure polished player experience.
- **Wumpus World:** Implemented AI-driven agent logic using search and rule-based reasoning. Managed game state and optimized performance to maintain smooth real-time decision-making.

## SKILLS

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- **Programming Languages:** Python, C, C++, C#
- **Machine Learning:** PyTorch, scikit-learn, SVM, CLIP, RAM, model evaluation, feature engineering
- **Computer Vision:** OpenCV, keyframe extraction, multimodal fusion, image embeddings
- **Game Development:** Unity, gameplay scripting, physics systems, UI/UX implementation
- **Software Engineering:** OOP, Agile development, Git workflows, requirements analysis
- **Other Tools:** Git, GitHub, Linux, LaTeX

## ADDITIONAL SKILLS

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- **English:** IELTS 7.0 (Academic)
- **Communication:** Technical writing, teamwork, analytical problem-solving