

Hung Nguyen

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RESEARCH INTERESTS

My research integrates frequency-domain methods, such as Fourier, cosine, and wavelet transforms, into modern computer vision architectures to impose useful priors for detail learning, regularization and compression.

EDUCATION

- **University of California San Diego**  *Sep 2023 - Jun 2029 (expected)*
M.S. and Ph.D. in Electrical Engineering (Signal and Image Processing)
San Diego, USA
- **Ho Chi Minh City University of Technology**  *Aug 2017 - Jun 2022*
B.Eng. in Mechatronics Engineering
Ho Chi Minh, Vietnam

RESEARCH EXPERIENCE

- **University of California San Diego**  *Sep 2024 - Present*
Graduate Student Researcher
San Diego, USA
 - Developed novel methods for compressed/sparse-view/radio-frequency Gaussian Splatting using priors derived from frequency-domain transforms, e.g., wavelet and Fourier transforms.
 - Co-advised by Distinguished Profs. [Truong Nguyen](#) and [Pamela Cosman](#) at the [Video Processing Lab](#).

WORK EXPERIENCE

- **VinMotion**  *Dec 2025 - May 2026*
Senior AI Engineer
Hanoi, Vietnam
 - Developed a data-efficient framework to transfer text-conditioned grasp detection model to speech, with deployment on Unitree humanoid robot.
- **WorldQuant**  *Jan 2023 - Jul 2023*
Quantitative Researcher Intern
Ho Chi Minh, Vietnam
 - Developed CNN models for stock price prediction and evaluated their performance on historical market data.

SKILLS

- **Programming Languages:** Python, C/C++, MATLAB
- **DL/ML Packages:** PyTorch, JAX, TensorFlow, Keras, standard image processing libraries (e.g., OpenCV, NumPy)
- **DL/ML Methods:** VLMs, Diffusion Models, Vision Transformers, NeRF/3DGS, CNNs.

HONORS AND AWARDS

- **ECE Department and Center for Wireless Communications Fellowships** *Feb 2026*
UC San Diego 
- **Vingroup Scholarship for Overseas Study for Master's and Doctoral Degrees** *Jun 2023*
Vingroup JSC 
- **Panasonic Asia Scholarship for Undergraduate Students** *Apr 2022*
Panasonic Vietnam 

FIRST-AUTHOR PUBLICATIONS & PREPRINTS

Hung Nguyen, An Le, Runfa Li, Truong Nguyen. [From Coarse to Fine: Learnable Discrete Wavelet Transform for Efficient 3D Gaussian Splatting.](#) ICCV workshop 2025.

Hung Nguyen, Runfa Li, An Le, Truong Nguyen. [DWTGS: Rethinking Frequency Regularization for Sparse-view 3D Gaussian Splatting.](#) VCIP 2025.

Hung Nguyen, Runfa Li, An Le, Truong Nguyen. [WaveletGaussian: Wavelet-domain Diffusion for Sparse-view 3D Gaussian Object Reconstruction.](#) ICASSP 2026.

Hung Nguyen, An Le, Truong Nguyen. [Learnable Multi-level Discrete Wavelet Transforms for 3D Gaussian Splatting Frequency Modulation.](#) EUSIPCO 2026.

Hung Nguyen*, Kim Nhat Minh Nguyen*, Van Duc Vu, Van-Danh Le, Hoang Huy Le, Dinh Tuan Nguyen, Pham Tuyen Le, Van-Truong Nguyen, Quan Nguyen. [Speech2Grasp: Data-Efficient Transfer of Text Conditioned Grasp Detection to Speech in Humanoid Robots.](#) arXiv preprint.