

Trung Pham

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Principal Research Scientist at **NVIDIA Cosmos Lab**, building **world foundation models for Physical AI**.
Track record across **research**, **product delivery**, and **technical leadership**. Ph.D. in Computer Vision;
Google PhD Fellow and **Heidelberg Laureate Forum** delegate.

EXPERIENCE

Principal Research Scientist — NVIDIA

2018 — Present

Build and scale world foundation models for Physical AI — multimodal systems that perceive, simulate, and reason about the physical world.

Technical lead for AV perception — architected and shipped production **BEV** and **camera perception** models into NVIDIA's autonomous driving stack.

Postdoctoral Research Fellow — Australian Centre for Robotic Vision, University of Adelaide

2014 — 2018

Research on 3D scene understanding and instance segmentation. Core team member on the **1st-place** entry at the **2017 Amazon Robotics Challenge**.

Software Engineering Intern — Google

Aug — Oct 2013

Efficient placement algorithms for a global storage system.

EDUCATION

Ph.D., Computer Vision — The University of Adelaide

2010 — 2014

Computer Vision, Machine Learning. **Google PhD Fellow**. **Dean's Commendation for Doctoral Thesis Excellence**.

M.Eng., Computer Engineering — Chonnam National University

2008 — 2010

[Brain Korea 21](#) Scholar.

B.Sc., Mathematics and Computer Science — Vietnam National University, HCMC

HONORS

1st place, Amazon Robotics Challenge (ACRV team)

2017

Dean's Commendation for Doctoral Thesis Excellence, Adelaide

2014

Invited delegate, Heidelberg Laureate Forum

2013

Google PhD Fellowship in Computer Vision

2012

Adelaide Scholarships International

2010 — 2014

Brain Korea 21 Scholarship

2008 — 2009

SKILLS

EXPERTISE	World foundation models · VLM · VLA · video generation & simulation · radar simulation · BEV perception · online mapping · end-to-end autonomous driving · 3D scene understanding · semantic segmentation · object detection · motion estimation · robust estimation.
STACK	Python · PyTorch · C++ · SLURM · large-scale distributed training.
LEADERSHIP	Technical lead · mentoring scientists and PhD interns · cross-functional teams.

SELECTED PUBLICATIONS

Cosmos 3: Omnimodal World Models for Physical AI	2026
NVIDIA. <i>NVIDIA Technical Report</i> .	
World Simulation with Video Foundation Models for Physical AI	2025
NVIDIA. <i>arXiv:2511.00062</i> .	
NVAutoNet: Fast and Accurate 360° 3D Visual Perception for Self-Driving	2024
T. Pham , M. Maghoumi, et al. <i>WACV 2024</i> .	
Bayesian Semantic Instance Segmentation in Open Set World	2018
T. Pham , V. B. G. Kumar, T.-T. Do, G. Carneiro, I. Reid. <i>ECCV 2018</i> .	
Cartman: The Low-Cost Cartesian Manipulator that Won the Amazon Robotics Challenge	2018
D. Morrison, ..., T. Pham , et al. <i>ICRA 2018</i> .	
A Bayesian Data Augmentation Approach for Learning Deep Models	2017
T. Tran, T. Pham , G. Carneiro, L. Palmer, I. Reid. <i>NeurIPS 2017</i> .	
Meaningful Maps — Object-Oriented Semantic Mapping	2017
N. Sünderhauf, T. Pham , Y. Latif, M. Milford, I. Reid. <i>IROS 2017</i> .	
Efficient Point Process Inference for Large-Scale Object Detection	2016
T. Pham , H. Rezatofighi, T.-J. Chin, I. Reid. <i>CVPR 2016</i> .	
The Random Cluster Model for Robust Geometric Fitting	2013
T. Pham , T.-J. Chin, J. Yu, D. Suter. <i>IEEE TPAMI 2013</i> .	

SERVICE

Reviewer for top-tier computer vision, machine learning, and robotics venues — **CVPR**, **ICCV**, **ECCV**, **NeurIPS**, **ICRA**, **IROS**, **IEEE TPAMI**, and **IEEE TIP**.