

PHAM QUANG HIEU

Woven Planet North America

Senior Software Engineer

3D computer vision • deep learning • autonomous driving

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EXPERIENCE

Woven Planet North America

Senior Software Engineer

Jul 2021 – present

- Leading a team of 4 engineers working on ML model deployment on the edge
- Partnering with the ML infra team to build an end-to-end development pipeline for edge compute
- Core contributor to the vision-only 3D perception stack

Lyft Level 5

Software Engineer

May 2021 – Jul 2021

- Architected and developed a new free space prediction module in the perception stack
- Continued with Woven Planet after the acquisition of Level 5 in Jul 2021

Meta Reality Labs

Research Intern

Aug 2020 – Nov 2020

- Researched on deep learning method for high-fidelity 3D eye segmentation

Lyft Level 5

Software Engineering Intern

Feb 2020 – Jun 2020

- Improved the performance of LiDAR-based large-vehicle detection model
- Led the migration effort of the detection code base from Tensorflow to PyTorch

EDUCATION

Singapore University of Technology and Design (SUTD)

Ph.D. in Computer Science

2016 – 2020

- Advisors: Dr. Sai-Kit Yeung and Dr. Gemma Roig
- Thesis: Data-driven 3D scene understanding
- SUTD President's Graduate Fellowship

Vietnam National University - Ho Chi Minh City University of Science

B.S. in Computer Science

2010 – 2014

- Summa cum laude

SELECTED PUBLICATIONS

RFNet-4D: Joint object reconstruction and flow estimation from 4D point clouds



European Conference on Computer Vision (ECCV)

2022

Tuan-Anh Vu, Duc Thanh Nguyen, Binh-Son Hua, [Quang-Hieu Pham](#), and Sai-Kit Yeung

Point-set distances for learning representations of 3D point clouds



International Conference on Computer Vision (ICCV)

2021

Trung Nguyen, [Quang-Hieu Pham](#), Tam Le, Tung Pham, Nhat Ho, and Binh-Son Hua

A*3D: An autonomous driving dataset in challenging environments



IEEE International Conference on Robotics and Automation (ICRA)

2020

[Quang-Hieu Pham](#)^{*}, Pierre Sevestre^{*}, Ramanpreet Singh Pahwa, Huijing Zhan, Chun Ho Pang, Yuda Chen, Armin Mustafa, Vijay Chandrasekhar, and Jie Lin

LCD: Learned cross-domain descriptors for 2D-3D matching



AAAI Conference on Artificial Intelligence

2020

Quang-Hieu Pham, Mikaela Angelina Uy, Binh-Son Hua, Duc Thanh Nguyen, Gemma Roig, and Sai-Kit Yeung

Revisiting point cloud classification: A new benchmark dataset and classification model on real-world data



International Conference on Computer Vision (ICCV)

2019

Mikaela Angelina Uy, Quang-Hieu Pham, Binh-Son Hua, Duc Thanh Nguyen, and Sai-Kit Yeung

JSIS3D: Joint semantic-instance segmentation of 3D point clouds with multi-task pointwise networks and multi-value conditional random fields



IEEE Conference on Computer Vision and Pattern Recognition (CVPR)

2019

Quang-Hieu Pham, Duc Thanh Nguyen, Binh-Son Hua, Gemma Roig, and Sai-Kit Yeung

Real-time progressive 3D semantic segmentation for indoor scenes



IEEE Winter Conference on Applications of Computer Vision (WACV)

2019

Quang-Hieu Pham, Binh-Son Hua, Duc Thanh Nguyen, and Sai-Kit Yeung

SceneNN: A scene meshes dataset with annotations



International Conference on 3D Vision (3DV)

2016

Binh-Son Hua, Quang-Hieu Pham, Duc Thanh Nguyen, Minh-Khoi Tran, Lap-Fai Yu, and Sai-Kit Yeung

SKILLS

Languages: English (fluent), Vietnamese (native)

Programming: C/C++, Python, CUDA, Pytorch, OpenGL, OpenCV