

# Anh Thuan Tran

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## EDUCATION

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### George Mason University

Virginia, USA

*Ph.D in Computer Science; GPA: 4.0/4.0*

*Sep 2024– Present*

- **Research Interest:** 3D vision, Vision language model, Open vocabulary processing, 3D Gaussian Splatting
- **Advisor:** Prof. Jana Kosecka

### Pukyong National University

Busan, South Korea

*M.Eng. in Artificial Intelligence Convergence; GPA: 4.4/4.5*

*Mar 2022 – Feb 2024*

- **Research Interest:** Computer vision, Deep learning, 3D vision, Point cloud weakly-supervised processing
- **Relevant coursework:** Neural Network, Statistical Learning Model, Artificial Intelligence Programming
- **Thesis:** Point Central Transformer Network for Weakly-supervised Point Cloud Semantic Segmentation (A+)
- Advisor:** Prof. Ki-Ryong Kwon

### University of Economics and Law, Vietnam National University

Ho Chi Minh City, Vietnam

*B.Ec. in E-commerce, Faculty of Information Systems; GPA: 7.8/10*

*Sep 2017 – Jul 2021*

- **Relevant coursework:** Data Structure and Algorithm, Probability Theory, Information System Analysis and Design, Programming Techniques, Database
- **Thesis:** Design of an AI-based Smart Classroom Management System (A+)
- Advisor:** Prof. Hoanh-Su Le

## PUBLICATIONS

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- [1] Anh Thuan Tran and Jana Koseka. Pointsplat: A transformer network for generalizable sparse 3d gaussians refinement. In *Under Review*, 2025.
- [2] Anh-Thuan Tran, Hoanh-Su Le, Suk-Hwan Lee, and Ki-Ryong Kwon. PointCT: Point Central Transformer Network for Weakly-Supervised Point Cloud Semantic Segmentation. In *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision*, pages 3556–3565, 2024.
- [3] Anh-Thuan Tran, Hoanh-Su Le, Suk-Hwan Lee, and Ki-Ryong Kwon. Local Graph Point Attention Network in Point Cloud Segmentation. *IEEE Access*, 11:33296–33312, 2023.
- [4] Anh-Thuan Tran, Hoanh-Su Le, Oh-Joon Kwon, Suk-Hwan Lee, and Ki-Ryong Kwon. General Local Graph Attention in Large-scale Point Cloud Segmentation. In *2023 IEEE International Conference on Consumer Electronics (ICCE)*, pages 1–4. IEEE, 2023.

## RESEARCH EXPERIENCE

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### Artificial Intelligence Lab

GMU, USA

*Graduate Research*

*Sep 2024 – Present*

- Working on 3D open-vocabulary point cloud understanding.
- Working on 3D Gaussian Splatting as representation for scene understanding and editing in dynamic environments.

### Multimedia Signal Processing Lab

Busan, South Korea

*Graduate Research*

*Mar 2022 – Feb 2024*

- Working on 4D point cloud panoptic segmentation in scene understanding. The proposed network can perform panoptic segmentation in point cloud sequences.
- Proposing point-based Transformer architecture in weakly-supervised 3D point cloud segmentation. The network outperform other fully-supervised methods using only 0.1% point annotations.

SCHOLARSHIP

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- Graduate Teaching Assistant, George Mason University (Sep. 2024 - Present)
- Brain Korea 21, Graduate Student Research Scholarship (Artificial Intelligence Convergence Research Group), Pukyong National University (Mar. 2022 - Feb. 2024)
- Full-time scholarship for graduate students, Pukyong National University (Mar. 2022 - Feb. 2024)
- Graduate student scholarship project support, Pukyong National University (Sep. 2022 - Feb. 2023)

AWARDS

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- Outstanding International Student Award - Pukyong National University (2024)
- Excellent achievement in undergraduate research – University of Economics and Law, VNU-HCM (2022)
- Third Prize Young Scientist – University of Economics and Law, VNU-HCM (2018, 2020)
- Third Prize Goldberg Machine Contest – South Korea (Nov. 2017)

PROFESSIONAL EXPERIENCE

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<b>Newgen I&amp;S</b> <i>Researcher</i>	Busan, South Korea <i>Jan 2024 – Jul 2024</i>
<ul style="list-style-type: none"><li>• Developing custom chatbot using RAG and Ollama to extract data from double-column PDF documents.</li><li>• Designing and building UI for uploading PDFs, extracting information, and updating PostgreSQL database.</li><li>• Deploying the system on server with WebSocket for real-time communication.</li></ul>	
<b>Tuan Loc Commodities</b> <i>Data Research Analyst</i>	Ho Chi Minh City, Vietnam <i>Sep 2021 – Jul 2022</i>
<ul style="list-style-type: none"><li>• Exporting reports monthly in docx and pptx format automatically using python directly from SQL Server. <b>Responsibilities:</b> Data cleaning and processing, extract charts and insights to predefined format</li><li>• Building forecasting model and backtest strategy to forecast future price in the coffee market <b>Responsibilities:</b> Building appropriate forecasting model (Prophet, Z-score) and integrate into current strategies</li></ul>	

CERTIFICATES

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<b>Google Data Analytics Certificate</b> <i>Data Analytics, SQL, Data Visualization, R, Problem Solving, Data Aggregation</i>	<i>Mar 2022</i>
<b>Data Science Professional Certificate</b> <i>AI, Data Analysis, Data Science, IBM Cloud, Clustering</i>	<i>Mar 2021</i>
<b>Applied Data Science Specialization</b> <i>Data Visualization, Machine Learning, Text Mining, Social Network Analysis</i>	<i>Apr 2020</i>
<b>Deep Learning Specialization</b> <i>Convolutional Neural Networks, Recurrent Neural Networks, LSTMs, Transformers, Tensorflow</i>	<i>Mar 2020</i>

SKILLS

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<b>Programming:</b> Python	<b>Framework:</b> Pytorch	<b>Operating System:</b> Ubuntu
<b>Libraries:</b> Pointops, Multiprocessing, Lr Scheduler, Numpy, Pandas, Matplotlib, TensorboardX		
<b>Applications:</b> Point cloud processing, 3D Gaussian Splatting, 2D-3D distillation, 3D Point Transformer, Open-vocabulary understanding		
<b>Languages:</b> Vietnamese (Native), English (Professional)		