# Tran Anh Thuan

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## EDUCATION

**Pukyong National University**                                        Busan, South Korea
*M.Eng. in Artificial Intelligence Convergence; **GPA: 4.4/4.5***          *Mar 2022 − Feb 2024 (Expected)*

- **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
  **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 − July 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

[1] 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.

[2] 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.

[3] 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.

[4] Tran Anh-Thuan, Nguyen Anh-Nhat, Bui Xuan-Thanh, Vo Nguyen-Tam-An, and Le Hoanh-Su. A proposed method for opinion mining online media of smartphone with Vietnamese text. In *The 6th International Conference for Small and Medium Business 2020 (ICSMB 2020)*, volume 1, pages 362–367, 2020.

## RESEARCH EXPERIENCE

**Multimedia Signal Processing Lab**                                   Busan, South Korea
*Graduate Research Assistant*                                          *Mar 2022 − Present*

- Working on 3D generative model and reconstruction in large-scale scenes.
- 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

- 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

- 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

**Tuan Loc Commodities**     Ho Chi Minh City, Vietnam
*Data Research Analyst*     *Sep 2021 – July 2022*

- Exporting reports monthly in docx and pptx format automatically using python directly from SQL Server.
  **Responsibilities:** Data cleaning and processing, extract charts and insights to predefined format
- Building forecasting model and backtest strategy to forecast future price in the coffee market
  **Responsibilities:** Building appropriate forecasting model (Prophet, Z-score) and integrate into current strategies

## Technical Projects

**AI-based Smart Classroom**

- Applying machine learning models in smart classroom specialized tasks for attendance, exam verification, and teaching evaluation.

**Opinion mining with Vietnamese text**

- News: Gather news, comments in the Smartphone industry in Vietnamese online newspapers and using machine learning to classify them.
- Product reviews: Building the semi-supervised sentimental model to classify online reviews on an e-commerce market.

**PhoBERT Extraction**

- Building module that accelerates installing and implementing PhoBERT for feature extraction and text generation in Vietnamese.

## Certificates

**Google Data Analytics Certificate**     *Mar 2022*
*Data Analytics, SQL, Data Visualization, R, Problem Solving, Data Aggregation*

**Data Science Professional Certificate**     *Mar 2021*
*AI, Data Analysis, Data Science, IBM Cloud, Clustering*

**Applied Data Science Specialization**     *Apr 2020*
*Data Visualization, Machine Learning, Text Mining, Social Network Analysis*

**Deep Learning Specialization**     *Mar 2020*
*Convolutional Neural Networks, Recurrent Neural Networks, LSTMs, Transformers, Tensorflow*

## Skills

**Programming:** Python     **Framework:** Pytorch     **Operating System:** Ubuntu

**Libraries**: Pointops, Multiprocessing, Lr Scheduler, Numpy, Pandas, Matplotlib, TensorboardX

**Applications**: Point cloud processing, Stock price forecasting, Text classification, Emotion detection, Automated report, Optimization clustering

**Languages:** Vietnamese (Native), English (Professional)