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 *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2024. Accepted.

[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.

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)