Tran Anh Thuan

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KEY SKILLS

Programming: Python. **Framework:** Tensorflow, Pytorch. **Operating System:** Ubuntu.

Point Cloud: Point-based Transformer for 3D weakly-supervised segmentation and 4D panoptic segmentation.

Time-series Forecasting: Forecasting stock value using Machine learning (Prophet) and Deep Learning (DeepAR) with Backtest Strategy (Backtrader).

Natural Language Processing: Sentimental classification with Machine Learning (SVM) and Deep Learning (RNN, LSTM, BiLSTM, BERT).

2D Vision: Machine Vision (OpenCV4), Face Recognition (MTCNN + Mxnet).

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

EDUCATION

Pukyong National University Busan, South Korea
*M.Eng. in Artificial Intelligence Convergence; **GPA: 4.4/4.5*** *Mar 2022 – Feb 2024 (Expected)*
- **Relevant coursework:** Neural Network, Statistical Learning Model, Optimization for AI, Artificial Intelligence Programming, Advanced Artificial Intelligence.

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, Web Data Analysis, E-Commerce Security, E-Commerce Strategies, E-Payment.

RESEARCH EXPERIENCE

Multimedia Signal Processing Lab Busan, South Korea
Graduate Research Assistant *Mar 2022 – Present*
- Working on 4D point cloud panoptic segmentation. The architecture is build upon point-based methods and previous Transformer attention mechanisms. 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.

GB AI Lab Ho Chi Minh City, Vietnam
Undergraduate Research Assistant *Jan 2018 – Oct 2021*
- Building complete solutions for smart classroom applied AI specialized in computer vision including face recognition and emotion detection.
- Implement machine learning and deep learning model for face detection. Transfer learning by using deep learning models for emotion classification.
- Building clustering algorithm that suggest location for school planning and visualizing results on map.
- Proposing function that covers the operating cost and individual cost for changing school location and algorithm to suggest students change current school with appropriate capacity.

SELECTED 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. Under Review, 2023.

[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.

WORK 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 with data visualization and corresponding text description directly from SQL Server.
  Responsibilities: Data cleaning and processing, extract charts and corresponding insights to predefined format automatically (MoM, YoY)
- Building forecasting model and backtest strategy to forecast future price in the coffee market combined with the actual stock
  Responsibilities: Manage and update master data with predefined features, Building appropriate the backtest strategy and compare with current strategies (Momentum, Mean Reverse, Pair Trading,..)

TECHNICAL PROJECTS

Point cloud segmentation
- Building point-based Transformer network for segmentation tasks using limited point annotations in large-scale indoor and outdoor point clouds.
- Proposing Transformer architecture for panoptic segmentation in point cloud sequences.

Algorithmic trading
- Applying machine learning model in forecasting (Prophet) and building corresponding backtesting strategies on Backtrader platform.
- Product reviews: Building the semi-supervised sentimental model to classify online reviews on an e-commerce market.

AI-based Smart Classroom
- Applying current machine learning models in smart classrooms for attendance, exam verification, and teaching evaluation tasks.
- Analysing model outputs and visualizing results into corresponding charts.

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.

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

IELTS: 7.0
July 2023 - July 2025