Le Nhut Nam

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"Complete disorder is impossible." — *Theodore S. Motzkin,*
Israeli-American mathematician, 1908 - 1970

Education

Graduated

University of Science, Viet Nam National University HCM City   **12/2023 – present**
Faculty of Mathematics and Computer Science   *Master of Science student*
Major in Applied Mathematics.

University of Science, Viet Nam National University HCM City   **12/2022 – present**
Faculty of Information Technology   *Master of Science student*
Major in Computer Science.

Research topics: Multi-relational graph, Machine learning, Optimization algorithms, Graph theory.

Undergraduate

University of Science, Viet Nam National University HCM City   **09/2018 – 09/2022**
Faculty of Information Technology   *Bachelor of Science degree*
Major in Computer Science.

Research topics: Knowledge graphs, Machine learning, Graph theory.
Thesis title: Link Prediction on Knowledge Graphs based-on Convolutional Neural Networks, Phan Anh-Hao & Le Nhut-Nam

Publications and preprints

- Knowledge graph embedding by relational rotation and complex convolution for link prediction.
  T. Le, N. Le and B. Le, *Expert Systems with Applications*, 2023, **214**, 119122.. arXiv:.

- Embedding Model with Attention over Convolution Kernels and Dynamic Mapping Matrix for Link Prediction.
  T. Le, N. Le and B. Le, Asian Conference on Intelligent Information and Database Systems, 2022, pp. 234–246. arXiv:.

Techincal skills

Programming experience
Python, C/C++, Julia, Java, CUDA

Machine learning framework
Pytorch, Tensorflow

Tool chains
Git, LaTeX, Conda, Docker, Jupyter, Jetbrains

Operating system
Arch Linux (on DWM), Ubuntu

Selected projects

A study on graph partition algorithms

Graph partition is the process of dividing a graph into multiple subgraphs or partition partitions, such that each subgraph is connected and has a certain desirable algorithms property, such as balanced size or minimal cut size. Although it is a challenging problem, finding a partition that makes graph analysis easier has applications in scientific computing. In this project, we provide a Python programming language implementation for a few well-known graph partitioning techniques. Public source code on Github.

Google AI4Code Understand Code

Understand in Python notebooks the relationship between code and comments using language models: codebert, graphcodebert and optimization techniques in Python (gradient accumulation, automatic mixed precision training, 8-bit Optimizers - 8- Notebooks bit Adam/AdamW Optimizer and fast tokenizers). Public source code at Github

Selected work experience

Industry internships

DIGIME PTE. LTD: AI Developer   *03/2023 – present*

Working on digital image-video processing, object detection tasks with YOLO models.

Academic teaching

FIT-HCMUS, VNU-HCMC: Visiting Lecturer   *09/2022 – present*

Was **Visiting Lecturer** in Faculty of Information Technology, VNUHCMC - University of Science. Instructed in laboratory for Parallel Programming, Graph Mining, Introducion to Data Science, Programming for Data Science, Introduction to Machine Learning, and Data Visualization.

Academic research working

DoCS, FIT-HCMUS, VNU-HCMC: Graduated Research Student   *01/2023 – present*

Advised by **Prof. PhD. Le Hoai Bac** and **MS.c Le Ngoc Thanh** on research topic of temporal knowledge graphs completion.

DoCS, FIT-HCMUS, VNU-HCMC: Undergraduated Research Student   *06/2021 – 07/2022*

Advised by **MS.c Le Ngoc Thanh** on research topic of link prediction on knowledge graphs.

More

HUST: Modern Machine Learning: Foundations and Applications   *11/09/2023 – 15/09/2023*

Was **participant** in Summer school of Modern Machine Learning: Foundations and Applications – MML hosted by HaNoi University of science and technology, VINBIGDATA, and NAVER

VMC: 10th Vietnam Mathematical Congression 2023   *08/08/2023 – 12/08/2023*

Was **participant** in 10th Vietnam Mathematical Congression 2023.

Miscellanea

- Vietnamese: Native speaker
- English: Intermediate level (5.5 Overall IELTS); written in English, publications and presentations are in English.