

# Le Nhut Nam (Nam Le)

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

## Education

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### Graduated

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**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.  
Research areas: Mathematical Programming, Optimization Algorithms

**University of Science, Viet Nam National University HCM City** **12/2022 – present**  
*Faculty of Information Technology - Department of Computer Science* *Master of Science student*  
Major in Computer Science.  
Research areas: Graph Representation Learning  
Thesis title: Temporal knowledge graph reasoning based on reinforcement learning

### Undergraduate

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**University of Science, Viet Nam National University HCM City** **09/2018 – 09/2022**  
*Faculty of Information Technology - Department of Computer Science* *Bachelor of Science degree*  
Major in Computer Science.  
Research areas: Machine learning, Graph Representation Learning, Knowledge graphs  
Thesis title: Link Prediction on Knowledge Graphs based-on Convolutional Neural Networks.

### High school

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**Hoang Le Kha High School For The Gifted, Vietnam.** **06/2015-06/2018**  
Graduated: good highschool diploma

## Publications and preprints

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- 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..
- 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.

## Technical skills

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### Programming experience

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Python, C/C++, Julia, Java, CUDA, R on Arch Linux. See <https://github.com/lnhutnam>

### Machine learning framework

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Pytorch, Pytorch Geometric, Tensorflow

### Tool chains

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Git, L<sup>A</sup>T<sub>E</sub>X, Conda, Docker, Jupyter

## Selected projects

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### 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

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### Industry internships.....

**DIGIME PTE. LTD:** AI Developer

03/2023 – 12/2023

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. Science, Programming for Data Science, Introduction to Machine Learning, and Data Visualization.

### Academic research working.....

**FIT-HCMUS, VNU-HCMC:** Graduated Research Student

01/2023 – present

Supervised by Prof. PhD. Le Hoai Bac on research topic of temporal knowledge graphs reasoning.

**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.....

**VIASM:** Winter school: Game theory & Combinatorial optimization

05/12/2023 – 06/12/2023

Was participant in Winter school of Game theory & Combinatorial optimization hosted by VIASM, HCMUS, & HaNoi University of science and technology

**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

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