

ANH HO

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Education

Hanoi University of Science and Technology - Vietnam

9/2019 - 10/2023

- BSc. Computer Science
- CGPA: 3.56/4.0 (convertible to 10-scale: 8.90)
- Thesis title: *Deep learning for automated detection of code smells* (Grade: 9.5/10 - A⁺ equivalent)
- Selected for *Talented Program* in Computer Science (Selected 35 out of 1000 in our cohorts)

Vo Nguyen Giap High School for the Gifted - Quang Binh, Vietnam

9/2016 - 6/2019

- Specialized Class in Mathematics.
- Awarded *Second Prizes* in Mathematics of the National Excellent Student Competition 2019, also known as Vietnam Mathematical Olympiad (VMO 2019).

Publications

Note: My name is bolded in the list of authors.

Conference Papers

EASE'23 A-ranking conference according to CORE Portal	Fusion of deep convolutional and LSTM recurrent neural networks for automated detection of code smells by Anh Ho , Anh M. T. Bui, Phuong T. Nguyen, Amleto Di Salle in Proceedings of the 27th International Conference on Evaluation and Assessment in Software Engineering, 2023, pp. 229–234. DOI
SOICT'22	Combining Deep Learning and Kernel PCA for Software Defect Prediction by Anh Ho , Nguyen Nhat Hai, Bui Thi Mai Anh in Proceedings of the 11th International Symposium on Information and Communication Technology, 2022, pp. 360–367. DOI

Journal Papers

JSS'24 Under Review Q1-Journal according-to Scimago	EnseSmells: Deep ensemble and programming language models for automated code smells detection by Anh Ho , Anh M. T. Bui, Phuong T. Nguyen, Amleto Di Salle. Under Review at Journal of Systems & Software, 2024. PDF
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Research Experience

Intelligent Software Engineering Laboratory - RISE, BK-AI, HUST

10/2021 - 12/2023

Research Assistant

- Research Topic: *Software Defect Prediction* and *Code Smell Detection*.
- Supervisor: Dr. Mai-Anh Bui (Research leader of the group RISE).
- Collaborating with Dr. Thanh-Phuong Nguyen (The University of L'Aquila, Italy), who has been my co-supervisor since October 2022.
- I am currently investigating diverse methods for feature extraction, including *Abstract Syntax Tree (AST)*, *software metrics*, and other relevant techniques, to identify crucial features from software units. Additionally, I am exploring various feature selection techniques such as *KPCA*, *Chi-square*, *Relief*, *Fisher score*, etc., to select the most pertinent features from the dataset. Furthermore, I am actively exploring the potential of *Large Language Models (LLMs)* in Software Engineering tasks such as *CodeBERT*, *CuBERT*, *CodeT5*, *code2vec*, etc. to gain understanding of software units, making them highly applicable to our specific application.
- My focus also involves a comprehensive study of various deep learning models. I aim to effectively combine these models to unveil novel possibilities and applications in the field of Software Engineering. Alongside, I have a keen interest in exploring *machine learning* and *heuristic algorithms* as viable solutions for our research problem.
- I am particularly interested in techniques with the potential to boost the performance and accuracy of Deep Learning models. Notably, I am exploring the effectiveness of *weighted loss functions*, *sampling techniques*, etc. to achieve improved results in our applications.

Research Intern

- Supervisor: *Dr. Bach Le*
- Research Topic: *Automated Software Program Repair*.
- Exploring the concept of regression errors and software debugging while also conducting a comprehensive survey and analysis of identifying, finding, repairing, and testing strategies related to regression errors.

Honors and Awards

Top 6 in Zalo AI Challenge 2022 2022

- Top 6 private test in Zalo AI Challenge - Task: *Lyrics Alignment*
- Leaderboard: <https://challenge.zalo.ai/portal/lyric-alignment/final-leaderboard>.
- An annual competition hosted by Zalo, a subsidiary of VNG Corporation, one of the largest tech companies in Vietnam.

Talent Scholarship for the academic year 2019 - 2020 2019

- Hanoi University of Science and Technology.
- Top 5% of students in the Faculty of Computer Science

Second Prizes in Mathematics of the National Excellent Student Competition 2019

- Vietnam Ministry of Education and Training.
- The top 40 candidates have been selected to participate in the Vietnam Team Selection Test 2019 (VN TST 2019), with the aim of choosing the top 6 students to represent the national team at the International Mathematical Olympiad 2019 (IMO 2019).

Odon Vallet Scholarship 2018

- The scholarship is supported by *Prof. Odon Vallet* and the *Vietnam Education & Science Foundation (Rencontres du Vietnam)*.

Mathematics and Youth Magazine 2018, 2019

- *Special Prize (2018)* and *Second Prize (2019)*.
- One of Vietnam's top two magazines for mathematics enthusiasts, alongside PI Magazine.

Extracurricular Activities

Teaching Assistant - AI Fresher Training Program at VinBigdata 9/2023 - 10/2023

- Contributed as a Teaching Assistant for Natural Language Processing (NLP) course in the prestigious program of VinBigdata, a renowned program for AI Fresher in Vietnam.

Summer School on Modern Machine Learning: Foundations and Applications 9/2023

- Hosted by SOICT - HUST and co-sponsored by VinBigdata - Vietnam and NAVER Group - Korea.
- Acceptance rate: 22.1%.

Personal Certificate of Merit 2020, 2021, 2022

- Awarded by President of Hanoi University of Science and Technology.
- Acknowledged for achieving excellent academic results and actively contributing to the university's youth organization.

Personal Certificate of University's Youth Union 2020, 2021, 2022

- Worked as Committee Member at Youth Union of School of Information and Communication Technology (SoICT).
- Worked as Committee Member at Organizing and Inspection Team in Youth Union of Hanoi University of Science and Technology (HUST).

"Student with 5 Good Criteria" - HUST 2021

- Awarded by President of Vietnam Union of Students in HUST.
- "Student with 5 Good Criteria" Movement - Good: Morality - Studying - Physical training - Volunteering - Integration