ANH HO

(+84) 329-373-699 | anhho.work@gmail.com | Anh Ho | https://brojackvn.github.io/ | brojackvn

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* submitted to Journal of Systems and Software.
PDF

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.

Software Engineering Research Group, The University of Melbourne 5/2023 - 12/2023

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 Commitee Member at Youth Union of School of Information and Communication Technology (SoICT).
- Worked as Commitee 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