Hoang Pham Van

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Education

Hanoi University of Science and Technology   **Bachelor**
Computer Science   2016 - 2021
GPA: 3.33/4.0

Working Experience

Rikkei AI
AI Engineer   March 2021 - May 2021
  – Building segmentation module to segment the ID card region.
  – Building detection module to detect four corners of the ID card.

Research Experience

Research Interests My current works focus on Sparse Neural Network, Continual Learning, and Meta Learning with the ultimate goal that creating AI model having the learning abilities like human (rapid and continuous learning tasks without catastrophic forgetting). In particular, I am investigating brain-inspired Continual Learning model which different network's components take into account different tasks.

Research Intern at University of Warwick   Nov 2022 - Dec 2022
I work on Understanding Pruning at Initialization project supervised by Prof. Long Tran-Thanh.

MAIL Lab - **VinUniversity** (Website: `http://khoadoan.me/research`)   Aug 2023 - Now
Research Assistant: Working on Trustworthy and Efficiency AI
Topics are interested in:
  – Watermarking Generative Models
  – Backdoor Attack and Defense
  – Sparse Neural Networks.

AI Lab - **FPT Software** (Website: `https://ai.fpt-software.com/ai-residency/`)   May 2021 - July 2023
AI Residency: Working with global researchers to publish papers at international conferences.
Topics are interested in:
  – Learning paradigms: Continual Learning, Meta-Learning, Transfer Learning etc.,
  – HyperNetwork.
  – Recommendation System.
  – Sparse Neural Networks.

Data Science Lab - **SoICT** (Website: `http://ds.soict.hust.edu.vn/`)   June 2019 - June 2021
Student Research Assistant: Learn and gain knowledge about machine learning, making research on continual learning and topic model.
  – Topic Models.
  – Continual Learning.
  – Self-supervised Learning.

Publication

* indicates equal contribution
  1. **Hoang Pham**, Quang Pham, Dung D. Le "HyperSparse: Specializing Parameters of Meta-Learning Models for Effective User Cold-Start Recommendation". (preprint).

2. **Hoang Pham**, Anh Ta-The, Shiwei Liu, Lichuan Xiang, Dung D. Le, Hongkai Wen, Long Tran-Thanh "Towards Data-Agnostic Pruning At Initialization: What Makes a Good Sparse Mask?". Advances in Neural Information Processing Systems, 2023.

3. **Hoang Pham***, Tuc Van Nguyen*, Anh Ta-The, Dung D. Le, Long Tran-Thanh "Pruning deep equilibrium models". Sparse Neural Networks workshop at ICML 2022.

4. Ha Nguyen*, **Hoang Pham***, Son Nguyen, Linh Ngo Van, Khoat Than "Adaptive infinite dropout for noisy and sparse data streams". Machine Learning, 2022.

5. Linh Ngo Van*, Nam Le Hai*, **Hoang Pham***, Khoat Than "Auxiliary Local Variables for Improving Regularization/Prior Approach in Continual Learning". The Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), 2022.

Achievements and Awards

Third prize, student awards for scientific research in school of Information and Community Technology, SoICT - HUST.	2020
Scholarship for students with good academic records, SoICT - HUST.	2016

Other Activities

1. Machine Learning/Deep Learning course	Nov 2018 - Jan 2019
Join as trainee.	
2. Reading group - DataScience Lab	2020
Reading and mining some problems of Deep Generative Models for Images Generation.	
3. Reading group - DataScience Lab	2020
Reading and mining the problems of applying machine learning in continual learning.	
4. Member of Meet AI mate group	2021
Reading and representing some basic problems inside Machine Learning.	

Courses and Skills

1) Joined online coursed:
- Linear Algebra (MIT).
- Multivariable Calculus (MIT).
- Convex Optimization (CMU, Princeton).
- Probability & Statistics (MIT, Standford).
- Machine Learning (Coursera).

2) Programming skills:
- Advanced: Python, Latex, and other Python library such as Numpy, Pandas, Matplotlib, Pytorch.
- OS: Linux/ Window.