Van Tien Pham

PhD Candidate in Computer Science

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My research focuses on pruning and tensor decomposition for neural network compression. I am currently seeking a postdoctoral position in the field of efficient AI, with an ambition of pursuing an academic career.

Education

11/2025 - 11/2022 **PhD in Computer Science**, *Université de Toulon, CNRS, LIS, UMR 7020*, France
Thesis: Neural network compression using pruning and low-rank approximations.

1/2021 - 8/2019 **Master's Degree in Computer Science**, *Hanoi University of Science and Technology (HUST)*, Vietnam
Thesis: Object detection, segmentation, and tracking from egocentric vision.
GPA: 4.0/4.0, Classification: Very good.

6/2019 - 9/2014 **Engineering Degree in Computer Science**, *HUST*, Vietnam
Programme de formation d'ingénieurs d'excellence au Vietnam.
GPA: 3.2/4.0, Classification: Very good.

Professional Experience

10/2022 - 7/2019 **Software Engineer**, *Viettel Group*, Vietnam
Developed a driving simulator using 3D simulation engines for training purposes, including a facial recognition module for enhanced user interaction.

2/2021 - 8/2018 **Intern in Computer Vision**, *MICA International Research Institute, CNRS, UMI 2954*, Vietnam
Worked on object recognition, detection, and tracking using neural networks.

Publications

Journals

1. V.T. Pham, Y. Zniyed, T.P. Nguyen, **Coupled tensor decomposition for compact network representation**, IEEE Transactions on Neural Networks and Learning Systems, pp. 1-15, 2025.
2. V.T. Pham, Y. Zniyed, T.P. Nguyen, **Singular values-driven automated filter pruning**, Neural Networks, vol. 192, p. 107857, December 2025.
3. N. Tokcan*, S.S. Sofi*, V.T. Pham*, C. Prévost*, S. Kharbech*, B. Magnier, T.P. Nguyen, Y. Zniyed, L. De Lathauwer, **Tensor decompositions for signal processing: theory, advances, and applications**, Signal Processing, vol. 238, p. 110191, January 2026. *These authors contributed equally to this work as co-first authors.
4. V.T. Pham, Y. Zniyed, T.P. Nguyen, **Enhanced network compression through tensor decompositions and pruning**, IEEE Transactions on Neural Networks and Learning Systems, vol. 36, pp. 4358–4370, March 2025.
5. V.T. Pham, Y. Zniyed, T.P. Nguyen, **Efficient tensor decomposition-based filter pruning**, Neural Networks, vol. 178, p. 106393, October 2024.

Preprints

1. V.T. Pham, Y. Zniyed, T.P. Nguyen, **Decoupling matrix-valued functions using zeroth- and first-order information and its application in neural network compression**, to be submitted, 2025.

Conferences

1. V.T. Pham, Y. Zniyed, T.P. Nguyen, **Hybrid network compression through tensor decompositions and pruning**, 32nd European Signal Processing Conference (EUSIPCO), Lyon, France, pp. 1052–1056, August 2024.

2. V.T. Pham, Y. Zniyed, T.P. Nguyen, **Élagage efficace des filtres basé sur les décompositions tensorielles**, XXIXème Colloque Francophone de Traitement du Signal et des Images (GRETSI), Grenoble, France, pp. 937-940, August 2023.

3. V.T. Pham, T.P. Nguyen, **Identification and localization of COVID-19 abnormalities on chest radiographs**, The International Conference on Artificial Intelligence and Computer Vision, pp. 251-261, 2023.

4. V.T. Pham, C.M. Tran, S. Zheng, T.M. Vu, S. Nath, **Chest X-ray abnormalities localization via ensemble of CNNs**, International Conference on Advanced Technologies for Communications, 2021.

5. V.T. Pham, T.H. Tran, H. Vu, **Detection and tracking hand from FPV: benchmarks and challenges on rehabilitation exercises dataset**, IEEE International Conference on Computing and Communication Technologies (RIVF), 2021. **Best paper runner-up award**.

6. V.T. Pham, T.L. Le, T.H. Tran, T.P. Nguyen, **Hand detection and segmentation using multimodal information from Kinect**, IEEE International Conference on Multimedia Analysis and Pattern Recognition (MAPR), 2020.

Seminars

1. V.T. Pham, Y. Zniyed, T.P. Nguyen, **Coupled tensor decomposition for compact network representation**, Journées Apprentissage Signal Image du LIS, Châteauneuf-le-Rouge, France, November 2025.

2. V.T. Pham, Y. Zniyed, T.P. Nguyen, **Hybrid network compression through tensor decompositions and pruning**, Journées Apprentissage Signal Image du LIS, Aix-en-Provence, France, June 2024.

Reviewer

Journals	IEEE Transactions on Pattern Analysis and Machine Intelligence, Expert Systems with Applications, Neurocomputing, Engineering Applications of Artificial Intelligence, The Journal of Supercomputing
Conferences	ICLR, AISTATS, ICMI, GRETSI

Skills

Programming	Python, C, R, Pascal, LaTeX, HTML
Frameworks and tools	PyTorch, Keras, Slurm (Jean Zay HPC), Matlab, Qt, Unreal Engine, OpenCV, Git, GitHub
Databases	MySQL, PostgreSQL

Languages

English	TOEIC 755/990
French	DELF B1 61/100
Vietnamese	Native

Honors

2016	Honorable Mention, ACM ICPC Vietnam National Programming Contest
2015	Second Prize, Vietnam Student Olympiad in Informatics
2014–2018	Excellence Scholarships, HUST