NGUYEN NHAT MINH TO

(+1) 672 999 8347 ◇ tnnhatminh@gmail.com ◇ mtrcl@student.ubc.ca
6335 Thunderbird Crescent, Vancouver, British Columbia, Canada. V6T 2G9
Google Scholar ◇ Linkedin ◇ Research Gate

EDUCATION

University of British Columbia *09/2020 - 08/2025*
PhD Student in Electrical and Computer Engineering
Graduate Support Initiative Awards
Machine Learning in CAI Award: Runner Up
37th World University Rankings 2022 *(THE World University Rankings)*

Sejong University *03/2017 - 08/2019*
Master of Computer Science and Engineering GPA: 4.42 / 4.5
Graduate Research Fellowship
6th Computer Science in South Korea *(THE World University Rankings)*

Vietnam National University, Ho Chi Minh - International University *10/2010 - 09/2014*
Bachelor of Biomedical Engineering GPA: 3.67 / 4
Student Research Accomplishment with Distinction
1st University in Vietnam *(QS Ranking)*

EXPERIENCE

Vector Institute, Canada *01/2024 - 04/2024*
Research Intern

· Detecting Distribution Shift in Medical Imaging
Supervisors: Dr. Rahul G Krishnan, Dr. Parvin Mousavi

University of British Columbia, Canada *09/2021 - 04/2025*
Teaching Assistant

· System Software Engineering (CPEN 333W1 & W2)
· Introduction to Computation in Engineering Design (CPSC 160)
Supervisor: Dr. Seyed Ali Mousavifar, Dr. Farshid Agharebparast

University of British Columbia, Canada *09/2020 - 08/2025*
Research Assistant at Robotics and Control Laboratory

· Computer-Aided Diagnosis for Prostate Cancer Detection in Ultrasound Imaging
Supervisors: Dr. Purang Abolmaesumi, Dr. Parvin Mousavi

Konkuk University Hospital, South Korea *06/2020 - 09/2020*
Researcher

· Acute Ischemic Stroke Diagnosis/Prognosis using Magnetic Resonance Angiography
· Design a software for collateral analysis in acute ischemic stroke
Supervisor: Dr. Hong Gee Roh, Dr. Jin Tae Kwak

University of British Columbia, Canada *01/2019 - 03/2019*
Visiting Researcher at Robotics and Control Laboratory

· Improved Artificial Intelligence System for Real-time Detection and Diagnosis of Prostate Cancer
Supervisor: Dr. Jin Tae Kwak, Dr. Purang Abolmaesumi

Sejong University, South Korea *03/2017 - 05/2020*
Research Assistant at Quantitative Imaging & Informatics Laboratory

· Computer-aided system for Prostate Cancer Diagnosis using Deep Learning
· Collateral Status Assessment of Acute Ischemic Stroke in MRI using Deep Regression Network
· Tissue image analysis via multi-parametric MRI
Supervisor: Dr. Jin Tae Kwak

Tan Tao University, Vietnam *10/2014 - 06/2016*
Research Assistant

· Relationship between Sub-cortical Volumes and reasoning performance of young adults
· Exercise-training Changes on Dual-task Functional Connectivity of Older Adults using Bayesian Network
Supervisor: Dr. Loan T. K. Vo

Research Reviewer *2017 - Now*
Conferences, Journals

· CVPR - Computer Vision and Pattern Recognition
· MICCAI - Medical Image Computing and Computer Assisted Intervention
· ISBI - IEEE International Symposium on Biomedical Imaging
· TPAMI - IEEE Transactions on Pattern Analysis and Machine Intelligence

HIGHLIGHTED RESEARCH

1. **ICML'25** [LINK] **To MN**, Wilson P., Nguyen V., Harmanani M., Cooper M., Fooladgar F., Abolmaesumi P., Mousavi P., Krishnann R. Improving Robustness to Subpopulation Shifts by Heuristic Subspace Exploration with Enhanced Diversification. (acceptance rate **26.9%**)

2. **CVPR Workshops'24** [LINK]: Fooladgar F, **To MN**, Mousavi P, Abolmaesumi P. Manifold DivideMix: A Semi-Supervised Contrastive Learning Framework for Severe Label Noise.

3. **MICCAI'20** [LINK]: **To MN***, Sankineni S, Xu S, Turkbey B, Pinto PA, Moreno V, Merino M, Wood BJ, Kwak JT. Improving Dense Pixelwise Prediction of Epithelial Density Using Unsupervised Data Augmentation for Consistency Regularization. In **International Conference on Medical Image Computing and Computer-Assisted Intervention 2020** Oct 4 (pp. 572-581). Springer, Cham. (acceptance rate **30%**)

JOURNAL PUBLICATIONS

1. **ER'22**: **To MN***, Kwak JT. Biparametric MR signal characteristics can predict histopathological measures of prostate cancer. **European Radiology**. 2022 May 4:1-2. (impact factor **7.043**)

2. **IJCARS'24** [LINK]: **To MN***, Fooladgar F, Wilson P, Harmanani M, Gilany M, Sojoudi S, Jamzad A, Chang S, Black P, Mousavi P, Abolmaesumi P. LensePro: Label noise-tolerant prototype-based network for improving cancer detection in prostate ultrasound with limited annotations. **International Journal of Computer Assisted Radiology and Surgery**. 2024 Jun;19(6):1121-8.. 2022 May;17(5):841-7.

3. **IJCARS'22** [LINK]: **To MN***, Fooladgar F, Javadi G, Bayat S, Sojoudi S, Hurtado A, Chang S, Black P, Mousavi P, Abolmaesumi P. Coarse label refinement for improving prostate cancer

detection in ultrasound imaging. **International Journal of Computer Assisted Radiology and Surgery**. 2022 May;17(5):841-7. (impact factor **3.421**)

4. **IJCARS'20** [LINK]: **To MN***, Kim HJ, Roh HG, Cho YS, Kwak JT. Deep regression neural networks for collateral imaging from dynamic susceptibility contrast-enhanced magnetic resonance perfusion in acute ischemic stroke. **International journal of computer assisted radiology and surgery**. 2020 Jan;15(1):151-62. (impact factor **3.421**)

5. **Med Image Anal '19** [LINK]: Aresta G, Arajo T, Kwok S, **To MN**, ... Bach: Grand challenge on breast cancer histology images. **Medical image analysis**. 2019 Aug 1;56:122-39. (impact factor **13.828**)

6. **Front Bioeng Biotechnol '19** [LINK]: Vu QD, Graham S, Kurc T, **To MN**, Shaban M, Qaiser T, Koohbanani NA, Khurram SA, Kalpathy-Cramer J, Zhao T, Gupta R. Methods for segmentation and classification of digital microscopy tissue images. **Frontiers in bioengineering and biotechnology**. 2019 Apr 2;7:53. (impact factor **6.064**)

7. **IJCARS'18** [LINK]: **To MN***, Vu DQ, Turkbey B, Choyke PL, Kwak JT. Deep dense multi-path neural network for prostate segmentation in magnetic resonance imaging. **International journal of computer assisted radiology and surgery**. 2018 Nov;13(11):1687-96. (impact factor **3.421**)

CONFERENCE PROCEEDINGS

1. **ICML'25** [LINK] **To MN**, Wilson P., Nguyen V., Harmanani M., Cooper M., Fooladgar F., Abolmaesumi P., Mousavi P., Krishnann R. Improving Robustness to Subpopulation Shifts by Heuristic Subspace Exploration with Enhanced Diversification.

2. **ICCV'25**:Vaseli H., Wu V., Kondori N., **To MN**, Fung A., Gu A., Abolmaesumi P. HAPPI: Hyperbolic Hierarchical Prototypes for Image Recognition. (Submitted)

3. **CVPR'24 Workshop** [LINK]: Fooladgar F, **To MN**, Mousavi P, Abolmaesumi P. Manifold DivideMix: A semi-supervised contrastive learning framework for severe label noise.

4. **ISBI'22** [LINK]: Fooladgar F, **To MN**, Javadi G, Samadi S, Bayat S, Sojoudi S, Eshumani W, Hurtado A, Chang S, Black P, Mousavi P. Uncertainty-Aware Deep Ensemble Model For Targeted Ultrasound-Guided Prostate Biopsy. In **2022 IEEE 19th International Symposium on Biomedical Imaging** (ISBI) 2022 Mar 28 (pp. 1-5). IEEE.

5. **MICCAI'20** [LINK]: **To MN***, Sankineni S, Xu S, Turkbey B, Pinto PA, Moreno V, Merino M, Wood BJ, Kwak JT. Improving Dense Pixelwise Prediction of Epithelial Density Using Unsupervised Data Augmentation for Consistency Regularization. In **International Conference on Medical Image Computing and Computer-Assisted Intervention 2020** Oct 4 (pp. 572-581). Springer, Cham. (acceptance rate **30%**)

6. **MICCAI'20** [LINK]: Javadi G, **To MN**, Samadi S, Bayat S, Sojoudi S, Hurtado A, Chang S, Black P, Mousavi P, Abolmaesumi P. Complex Cancer Detector: Complex Neural Networks on Non-stationary Time Series for Guiding Systematic Prostate Biopsy. In **International Conference on Medical Image Computing and Computer-Assisted Intervention 2020** Oct 4 (pp. 524-533). Springer, Cham. (acceptance rate **30%**)

7. **ISBI'20** [LINK]: **To MN***, Sankineni S, Xu S, Turkbey B, Choyke PL, Pinto PA, Moreno V, Merino M, Wood BJ, Kwak JT. Deep Learning Framework for Epithelium Density Estimation in Prostate Multi-Parametric Magnetic Resonance Imaging. In **2020 IEEE 17th International Symposium on Biomedical Imaging** (ISBI) 2020 Apr 3 (pp. 438-441). IEEE.

8. **ICIAR'18** [LINK]: Vu QD, **To MN**, Kim E, Kwak JT. Micro and macro breast histology image analysis by partial network re-use. In **International Conference Image Analysis and**

Recognition 2018 Jun 27 (pp. 895-902). Springer, Cham.

PRESENTATIONS

1. **IPCAI'24**: **To MN***, Fooladgar F, Wilson P, Harmanani M, Gilany M, Jamzad A, Chang S, Black P, Mousavi P, Abolmaesumi P. LensePro: Label noise-tolerant prototype-based network for improving cancer detection in prostate ultrasound with limited annotations, ***13th Information Processing in Computer-Assisted Interventions***, June, 2024.
2. **IPCAI'22** (Oral presentation): **To MN***, Fooladgar F, Javadi G, Bayat S, Sojoudi S, Hurtado A, Chang S, Black P, Mousavi P, Abolmaesumi P. Increasing Diagnostic Yield of Prostate Cancer During Ultrasound Guided Biopsy in the Presence of Label Noise, ***13th Information Processing in Computer-Assisted Interventions***, June 7-8, 2022.
3. **MICCAI'20** (Oral presentation): **To MN***, Sankineni S, Xu S, Turkbey B, Pinto P, Moreno V, Merino M, Wood B, Kwak JT. Improving dense pixelwise prediction of epithelial density using unsupervised data augmentation for consistency regularization, ***Medical Image Computing and Computer Assisted InterventionMICCAI 2020: 23rd International Conference***, October 4-8, 2020.
4. **CARS'19** (Oral presentation): **To MN***, Kim HJ, Roh HG, Cho YS, Kwak JT. Deep regression neural networks for collateral assessment from dynamic susceptibility contrast-enhanced magnetic resonance perfusion in acute ischemic stroke, ***Computer Assisted Radiology and Surgery***, June 18-21, 2019.
5. **CARS'18** (Lecture presentation): **To MN***, Vu QD, Turkbey B, Choyke P, Kwak JT. Deep dense multipath neural network for prostate segmentation in magnetic resonance imaging, ***Computer Assisted Radiology and Surgery***, June 20-23, 2018.
6. **EMBC'17** (Poster presentation): **To MN***, Kim JK, Kwak JT. Transfer learning with deep residual networks for prostate cancer detection in multiparametric magnetic resonance imaging, ***IEEE Engineering in Medicine and Biology***, 39th Annual International Conference of the IEEE, July 11-15, 2017.

PATENTS

1. Kwak JT, **To MN**, Kim HJ, ROH HG, inventors; Industry Academic Cooperation Foundation of Catholic University of Korea, Industry Academic Collaboration Foundation of Konkuk University Glocal, assignee. Learning method for generating multiphase collateral image and multiphase collateral image generating method using maching learning. **United States patent application US** 17/483,711. 2022 Jan 13. [LINK]

AWARDS

Machine Learning in CAI Award: Runner Up *June 2022*
13th Information Processing and Computer-Aided Interventions, Tokyo, Japan

Graduate Support Initiative Award *2021 - 2023*
University of British Columbia, Canada

Graduate Research Fellowship *2017 - 2019*
Sejong University, South Korea

Student Research Accomplishment with Distinction (Annual Award) *2012*
Vietnam National University, Ho Chi Minh - International University, Vietnam

University Entrance Examination Scholarships *2010*
Vietnam National University, Ho Chi Minh - International University, Vietnam

Third Prize in Information Technology - Student Olympic (Annual Competition) *2008*
Southern Vietnam

EXTRACURRICULAR ACTIVITIES

Chess player *2007 - 2010*
Secondary School Representative
Won a gold medal at City-level tournament in Team event

Table Tennis player
President of the Table Tennis Club at International University *2011 - 2014*
Vice President of the Table Tennis Club at Sejong University *2017 - 2021*
Won gold and silver medals in many international competitions for students

SKILLS

Programming Languages	Python, Matlab, C/C++, C#
Deep Learning Tools	MXNet, Keras, PyTorch, Torch Geometric
English	TOEFL: 101 / 120
	(Reading 29, Listening 27, Speaking 21, Writing 24)