

# Hoang NT

## Profile

*I am a machine learning engineer at SmartNews, Inc. I am interested in developing large scale machine learning methods for graph-structured data such as social networks and recommender systems.*  
Updated 2021-11-29

## Work Experience

- Nov 2021 – **ML Engineer**, SmartNews, Inc., Tokyo, Japan.  
Present News Ranking Engineer.
- Jan 2020 – **Researcher**, RIKEN Center for Advanced Intelligence Project, Tokyo, Japan.  
Oct 2021 Research on kernel analysis with a focus on tangent kernels.
- Jan 2019 – **Researcher**, RIKEN Center for Advanced Intelligence Project, Tokyo, Japan.  
Oct 2020 Research on graph embedding theory from graph signal processing and graph homomorphism perspectives.
- Oct 2018 – **Research Assistant**, School of Computing, Tokyo Tech, Tokyo, Japan.  
May 2021 Research on graph neural networks with applications to weakly supervised learning.
- 2016 – 2017 **Research Assistant**, School of Computing, Tokyo Tech, Tokyo, Japan.  
Research on the neural network compression technology for the CREST-Deep project funded by JST.

## Education

- 2015 – 2017 **Tokyo Institute of Technology**, School of Computing.  
M.Eng. Degree, Computer Science, IGP-A Program.  
GPA: 3.0 / 3.0 (Japanese system) – Ranked 1st.
- 2009 – 2014 **Hanoi University of Science and Technology**, School of Telecommunication.  
B.Eng. Degree, Computer Engineering.  
GPA: 3.21 / 4.00 (major: 3.56 / 4.00) – Top 5%.

## Publications (refereed)

- Conference • **NeurIPS 2021** *Learning on Random Balls is Sufficient for Estimating (Some) Graph Parameters*, Takanori Maehara and Hoang NT, 35<sup>th</sup> Conference on Neural Information Processing Systems (NeurIPS), Online 2021.  
CoRR abs/2111.03317, Nov 2021
- **ICML 2020** *Graph Homomorphism Convolution*, Hoang NT and Takanori Maehara, 37<sup>th</sup> International Conference on Machine Learning (ICML), Online 2020.  
CoRR abs/2005.01214, June 2020
- **ICPR 2020** *Revisiting Graph Neural Networks: Graph Filtering Perspective*, Hoang NT, Takanori Maehara, and Tsuyoshi Murata, 25<sup>th</sup> International Conference on Pattern Recognition, Online 2021.
- Workshop • **ICLR-LLD 2019** *Learning Graph Neural Networks with Noisy Labels*, Hoang NT, Choong Jun Jin, and Tsuyoshi Murata, ICLR 2019 Limited Labeled Data Workshop.  
CoRR abs/1905.01591
- **IJCAI-ReLiG 2017** *Motif-Aware Graph Embedding*, Hoang NT and Tsuyoshi Murata, IJCAI 2017 ReLiG Workshop.
- Preprint • *Adaptive Stacked Graph Filter*, Hoang NT, Takanori Maehara, and Tsuyoshi Murata.  
CoRR abs/2011.10988, Nov 2020

- *A Simple Proof of the Universality of Invariant/Equivariant Graph Neural Networks*, Takanori Maehara and Hoang NT.  
CoRR abs/1910.03802, Oct 2019
- *Revisiting Graph Neural Networks: All We Have is Low-Pass Filters*, Hoang NT and Takanori Maehara.  
CoRR abs/1905.09550, May 2019

## Awards and Scholarships

2015 – 2017 **Japanese Government (MEXT) Scholarships.**  
University Recommendation, IGP-A Program for Advanced Technology Leaders.

## Programming Languages and Frameworks

Scripting **Python**  
Framework **PyG, PyTorch, Scikit-Learn, TensorFlow**  
Programming **C++**

## Other Activities

Jul 2021 **NeurIPS Meetup 2021** Online.  
Organizer for NeurIPS Japan Meetup. Website: <https://neuripsmeetup.jp/2021/>

Dec 2020 **NeurIPS Meetup 2020** Online.  
Organizer for NeurIPS Japan Meetup. Website: <https://neuripsmeetup.jp/2020/>

Jul 2020 **ICML 2020** Online.  
Virtual volunteer for the conference.

Sep 2019 **TU Berlin & RIKEN AIP Joint Workshop** at TU Berlin.  
Poster presentation: Frequency analysis for GNN

Aug 2019 **CREST-Deep Workshop** at Lecture Hayama.  
Presentation title: Learning Graph Neural Networks with Noisy Labels

Jun 2019 **PLMW@PLDI'19** at Phoenix, Arizona, USA.  
Programming Languages Mentoring Workshop at PLDI'19 (travel grant by ACM)

## Languages

English **Fluent**  
Japanese **Basic**