Duong Minh Le

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Research Interest

Machine Learning, Natural Language Processing.

Education

Georgia Institute of Technology Atlanta, GA

Ph.D. student in Computer Science Aug. 2022 - now

Advisor: Professor Wei Xu

Hanoi University of Science and Technology Hanoi, Vietnam

Bachelor of Science, Computer Science Sep. 2015 - Aug. 2020

GPA: 3.72/4.00, graduate with excellent degree

Research and Working Experience

Research Engineer May. 2021 - Present

VinAI Research, Vietnam (vinai.io) *Hanoi, Vietnam*

Supervisors: Dr. Tin Vo & Dr. Dat Quoc Nguyen

- Designing a text generation model which is able to generate replies given the customers' reviews.
- Developing a retrieval based question-answering module for a Vietnamese speech-based question answering system.
- Developing small deep learning models, which can fit in edge devices, to solve the task of intent detection and slot filling.

AI Resident Aug. 2019 - Apr. 2021

VinAI Research, Vietnam (vinai.io) *Hanoi, Vietnam*

Mentor: Prof. Thien Huu Nguyen

- Introducing a novel deep learning model for Event Factuality Prediction that explicitly considers multi-hop paths with both syntax-based and semantic-based edges between the words to obtain sentence structures for representation learning.
- Introducing a novel method, which leverages the synset typology in WordNet, to create a large and high-quality dataset for Fine-grained Event Trigger Detection with minimal human effort.
- Proposing a new approach to improve the performance of the state-of-the-art metaphor detection model by incorporating the knowledge from the related task and the syntactic knowledge from dependency trees.

Research student Aug. 2018 - Aug. 2020

Data Science Lab, HUST (ds.soict.hust.edu.vn) *Hanoi, Vietnam*

- Took a training course in Machine Learning

Publication

Nguyen Luong Tran, **Duong Minh Le**, Dat Quoc Nguyen. *BARTpho: Pre-trained Sequence-to-Sequence Models for Vietnamese.* In Proceedings of the 23rd Annual Conference of the International Speech Communication Association (INTERSPEECH).

Tin Duy Vo, Manh Tien Luong, **Duong Minh Le**, Hieu Minh Tran, Nhan Tri Do, Duy Nguyen, Thien Hai Nguyen, Hung Hai Bui, Dat Quoc Nguyen, Dinh Quoc Phung. *Vietnamese Speech-based Question Answering over Car Manuals.* In NeurIPS Data-Centric AI Workshop 2021.

Duong Minh Le, Thien Huu Nguyen. *Does It Happen? Multi-hop Path Structures for Event Factuality Prediction with Graph Transformer Networks.* In Proceedings of the 7th Workshop on Noisy User-generated Text (W-NUT 2021) at EMNLP 2021 **(Best paper runner-up)**.

Duong Minh Le, Thien Huu Nguyen. *Fine-Grained Event Trigger Detection.* In Proceedings of 16th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2021), April 2021.

Duong Minh Le, My Thai and Thien Huu Nguyen. *Multi-task Learning for Metaphor Detection with Graph Convolutional Neural Networks and Word Sense Disambiguation.* In Proceedings of Thirty-Fourth AAAI Conference on Artificial Intelligence, New York, USA, 2020.

OTHER ACTIVITIES

Technical talk at AI DAY 2020

Title: *Multi-task Learning for Metaphor Detection with Graph Convolutional Neural Networks and Word Sense Disambiguation.*
Link: *shorturl.at/oGUX8*