

Xuan Phi Nguyen

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RESEARCH PUBLICATIONS

- Xuan-Phi Nguyen, Shafiq Joty, Wu Kui & Aw Ai Ti (2022). *Refining Low-Resource Unsupervised Translation by Language Disentanglement of Multilingual Model*. 36th Conference on Neural Information Processing Systems (**NeurIPS 2022**).
- Xuan-Phi Nguyen, Hongyu Gong, Yun Tang, Changhan Wang, Philipp Koehn & Shafiq Joty (2022). *Contrastive Clustering to Mine Pseudo Parallel Data for Unsupervised Translation*. In International Conference on Learning Representations (**ICLR 2022**).
- Xuan-Phi Nguyen, Shafiq Joty, Thanh-Tung Nguyen, Wu Kui, & Ai Ti Aw (2021). *Cross-model Back-translated Distillation for Unsupervised Machine Translation*. In Proceedings of the 38th International Conference on Machine Learning (**ICML 2021**).
- Xuan-Phi Nguyen, Shafiq Joty, Wu Kui & Aw Ai Ti (2020). *Data Diversification: A Simple Strategy For Neural Machine Translation*. 34th Conference on Neural Information Processing Systems (**NeurIPS 2020**).
- Xuan-Phi Nguyen, Shafiq Joty, Steven Hoi & Richard Socher (2020). *Tree-Structured Attention with Hierarchical Accumulation*. In International Conference on Learning Representations (**ICLR 2020**).
- Thanh-Tung Nguyen, Xuan-Phi Nguyen, Shafiq Joty & Xiaoli Li (2021). *A Conditional Splitting Framework for Efficient Constituency Parsing*. In Proceedings of Association for Computational Linguistics (**ACL 2021**).
- Thanh-Tung Nguyen, Xuan-Phi Nguyen, Shafiq Joty & Xiaoli Li (2021). *RST Parsing from Scratch*. In the North American Chapter of the Association for Computational Linguistics (**NAACL 2021**).
- Xuan-Phi Nguyen*, Thanh-Tung Nguyen*, Shafiq Joty & Xiaoli Li (2020). *Differentiable Window for Dynamic Local Attention*. In Proceedings of the Association for Computational Linguistics (**ACL 2020**).
- Thanh-Tung Nguyen, Xuan-Phi Nguyen, Shafiq Joty & Xiaoli Li (2020). *Efficient Constituency Parsing by Pointing*. In Proceedings of the Association for Computational Linguistics (**ACL 2020**).
- Xuan-Phi Nguyen & Shafiq Joty (2019). *Phrased-based Attention*. arXiv preprint arXiv:1810.03444.
- P. X. Nguyen, Z. Lu, W. Huang, S. Huang, A. Katsuki & Z. Lin (2019). *Medical image segmentation with stochastic aggregated loss in a unified U-Net*. In 2019 IEEE EMBS International Conference on Biomedical Health Informatics (BHI) (**IEEE BHI 2019**), Chicago, USA.

EXPERIENCE

Facebook AI Research (FAIR), Meta Platforms

AI Research Intern

United States

May 2022 – Sep 2022

- Researched on improving Speech-to-Speech translation by introducing new ways to generate and augment synthetic data. Our paper is being submitted to ICASSP 2023.

Facebook AI Research (FAIR), Meta Platforms

AI Research Intern

United States (Remote)

May 2021 – Sep 2021

- Researched and developed a novel pseudo-parallel data mining technique and integration strategy to achieve the state of the art in Unsupervised Machine Translation. Our paper is published in ICLR 2022.

Salesforce AI Research Asia

AI Research Intern

Singapore

May 2019 – Aug 2019

- Researched on novel neural architectures to improve various natural language processing tasks. Proposed new state-of-the-art methods and submitted papers to machine learning conferences. Our paper is published in ICLR 2020.

Natural Language Processing Group, Nanyang Technological University

Research Assistant

Singapore

Mar 2018 – May 2019

- Researched on different limitations and improvements on Neural Machine Translation, such as document-level machine translation, discourse phenomena, phrase-based, parsing-tree-based and unsupervised neural machine translation.

Visa Worldwide Pte Limited (Visa Inc.)

Software Engineer Intern

Singapore

May 2017 – Jul 2017 and Jan 2018 – Jul 2018

- Developed a lightweight character-level convolutional neural network to perform scripted text classification tasks at up to 98% accuracy while consuming 1000 times less resources.

Panasonic Research and Development Center

Software Engineer Intern

Singapore

May 2016 – Jul 2016

- Cooperated to develop a new AI algorithm based on Support Vector Machine to classify electrical signals, achieving 94% of experimental accuracy and 83.8% real-time accuracy.

HONORS & AWARDS

- 2021 Singapore Data Science Consortium (SDSC) Dissertation Research Award** *Jan 2022*
○ Awarded for innovative and impactful thesis work of PhD students whose research interests are in data science.
- A*STAR Computing and Information Science (ACIS) Scholarship** *Jul 2019 – Jul 2023*
○ Fully funded by A*STAR to pursue the doctorate program in NTU, Singapore.
- The Global Undergraduate Awards - Highly Commended Paper** *Sep 2019*
○ Top **10%** out of more than 3500 papers submitted globally.
- Shopee - IET Machine Learning Challenge Competition - 2nd Runner-up** *Mar 2018*
○ Designed ensemble techniques to achieve 2nd Runner-up prize with 85.662% accuracy in image classification task.
- SUTD What The Hack Hackathon - Best Software Hack - Best Security Hack** *Sep 2017*
○ Eye Gesture Control Application: VR device powered by neural networks to help the disabled to perform daily tasks.
- Singapore Scholarship** *Jul 2015 – Jul 2019*
○ Fully funded by Ministry of Foreign Affairs of Singapore to pursue the undergraduate program in NTU, Singapore.

EDUCATION

- Nanyang Technological University** **Singapore**
Doctor of Philosophy in Computer Science & Artificial Intelligence. *Expected Graduation: April 2023*
- Nanyang Technological University** **Singapore**
Bachelor in Electrical & Electronics Engineering. CGPA: 4.87/5.00 (First Class) Graduation: July 2019
- **Twice Dean's List** Awards – Top **5%** of cohort on academic performance, AY 2016/2017 - AY 2017/2018.
 - Undergraduate Research Experience on CAmpus (**URECA**) Project: built a "Mobile Visual Search Engine" application.
 - **Final Year Project:** Research on medical image segmentation with deep learning.