# Xuan Phi Nguyen

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## Research Papers

- **Xuan-Phi Nguyen**, Shafiq Joty, Wu Kui & Aw Ai Ti (2019). *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).
- **Xuan-Phi Nguyen**, Shafiq Joty, Wu Kui & Aw Ai Ti (2020). *Cross-model Back-translated Distillation for Unsupervised Machine Translation.* arXiv preprint.
- **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 Attentions.* 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

**Salesforce AI Research Asia**                                        **Singapore**
*NLP Research Intern*                                        *May 2019 – Aug 2019*

- Researched on different aspects of linguistic structures languages on the performances of neural architectures on various natural language processing tasks. Proposed new state-of-the-art methods and wrote papers submitted to machine learning and NLP conferences.

**Natural Language Processing Group, Nanyang Technological University**                                        **Singapore**
*Research Assistant*                                        *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.
- Wrote papers submitted to various machine learning and NLP conferences, e.g: ICLR, ACL, EMNLP.

**Visa Worldwide Pte Limited (Visa Inc.)**                                        **Singapore**
*Software Engineer Intern*                                        *May 2017 – Jul 2017 and Jan 2018 – Jul 2018*

- Developed a novel lightweight character-level convolutional neural network to perform scripted text classification tasks at up to 98% accuracy while consuming 1000 times less resources and achieving 10 times faster training time than standard deep models. Developed production-level code to deploy the models.

**Panasonic Research and Development Center Singapore**                                        **Singapore**
*Software Engineer Intern*                                        *May 2016 – Jul 2016*

- Researched and cooperated to develop a new machine learning algorithm based on Support Vector Machine to classify electrical signals, achieving 94% of experimental accuracy. Assisted to design a Raspberry Pi robot for collecting sensor signals and communicating with server to manipulate a real car's system. Real-time accuracy reached 83.8%.

## EDUCATION

**Nanyang Technological University**                                        **Singapore**
*Doctor of Philosophy in Computer Science & Artificial Intelligence.*                                        *Expected Graduation: July 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.

## HONORS & AWARDS

**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 - $2^{nd}$ *Runner-up*** *Mar 2018*

- Designed ensemble techniques to achieve $2^{nd}$ 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.

## SKILLS PROFILE

- Deep learning, Machine learning research
- Pytorch, Tensorflow, LaTeX

- Python, Angular 4, NodeJS, MongoDB, Django
- Familiar with Linux & UNIX-like system