

Curriculum Vitae

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Thang Luong

Department of Computer Science
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Gates 235, 353 Serra Mall
Stanford, CA 94305, USA

❖ Education

Ph.D., Computer Science

Thesis: Neural Machine Translation

Committee: Chris Manning, Dan Jurafsky, Andrew Ng, Quoc Le, Chris Potts.

Sep 2011 - Jun 2016

Stanford University, USA

B.A., Computer Science

First class honor

Aug 2005 - Dec 2008

National University of Singapore, Singapore

❖ Experience

PhD Student

Advisor: Christopher D. Manning

Director of Educational Affairs, Stanford NLP group.

Lead the *Deep Machine Translation* team.

Advise 2 junior PhD, 2 Master, and undergraduate students.

Sep 2011 – present

Stanford University, USA

Summer Internship

Host: Quoc V. Le

2015: Built multi-task neural models, achieving the *best language parser*.

2014: Built the first *state-of-the-art neural translation system*.

Summer, 2014, 2015

Google Brain, USA

Teaching Assistant (Head TA)

Course: Information Retrieval and Web Search

Instructors: Christopher D. Manning, Pandu Nayak, and Prabhakar Raghavan.

Oversaw a team of 6 TAs, designed a new assignment on *learning to rank*.

Spring 2013, 2014

Stanford University, USA

Visiting Scholar

Host: Mark Johnson

Developed grounded language learning models for child-directed speech.

Fall, 2012

Macquarie University, Australia

Research Assistant

Advisor: Noah D. Goodman

Developed models that predict users' reading times of natural text.

Fall, 2011

Stanford University, USA

Research Assistant

Advisor: Khe Chai Sim

Developed noise-robust speech recognition models.

Nov 2010 - Aug 2011

National University of Singapore

Research Assistant

Advisor: Min-Yen Kan

Improved machine translation and developed digital library packages.

Feb 2009 - Oct 2010

National University of Singapore

❖ Selected Publications (*Full list:* <https://goo.gl/BP1evQ>)

Achieving Open Vocabulary Neural Machine Translation with Hybrid Word-Character Models

ACL'16

P12

Minh-Thang Luong and Christopher D. Manning

SOTA English-Czech translation. Achieve +2.1 to +11.4 BLEU improvement.

- P11 **Models and Inference for Prefix-Constrained Machine Translation** *ACL'16*
 Joern Wuebker, Spence Green, John DeNero, Sasa Hasan, and Minh-Thang Luong
SOTA in the prefix completion task for interactive machine translation.
- P10 **Compression of Neural Machine Translation Models via Pruning** *CoNLL'16*
 Abigail See*, Minh-Thang Luong*, and Christopher D. Manning
Can prune models up to 80% without loss of performance.
- P9 **Multi-task Sequence to Sequence Learning** *ICLR'16*
Minh-Thang Luong, Quoc V. Le, Ilya Sutskever, Oriol Vinyals, and Lukasz Kaiser
SOTA English constituent parser, 93 F₁.
- P8 **Stanford Neural Machine Translation Systems for Spoken Language Domain** *IWSLT'15*
Minh-Thang Luong and Christopher D. Manning
SOTA English-German TED talk translation, 26% error reduction.
- P7 **Effective Approaches to Attention-based Neural Machine Translation** *EMNLP'15*
Minh-Thang Luong, Hieu Pham, Christopher D. Manning
SOTA English-German translation.
- P6 **When Are Tree Structures Necessary for Deep Learning of Representations?** *EMNLP'15*
 Jiwei Li, Minh-Thang Luong, Dan Jurafsky, and Eduard Hovy
- P5 **Addressing the Rare Word Problem in Neural Machine Translation** *ACL'15*
Minh-Thang Luong*, Ilya Sutskever*, Quoc V. Le*, Oriol Vinyals, and Wojciech Zaremba
SOTA English-French translation.
- P4 **A Hierarchical Neural Autoencoder for Paragraphs and Documents** *ACL'15*
 Jiwei Li, Minh-Thang Luong, and Dan Jurafsky
- P3 **Bilingual Word Representations with Monolingual Quality in Mind** *NAACL'15, VSM*
Minh-Thang Luong, Hieu Pham, Christopher D. Manning
SOTA cross-lingual document classification.
- P2 **Better Word Representations with Recursive Neural Networks for Morphology** *CoNLL'13*
Minh-Thang Luong, Richard Socher, and Christopher D. Manning
- P1 **Parsing Entire Discourses as Very Long Strings: Capturing Topic Continuity in Grounded Language Learning** *TACL'13*
Minh-Thang Luong, Michael C. Frank, and Mark Johnson

❖ Professional Activity

Talks at Google, OpenAI, SemanticMachines, Baidu, Facebook (May'15); MSR, ISI (Feb'16); Apple (Dec'15); IBM (Oct'15).

Panel discussion at IWSLT on “New trends in Spoken Language Translation” (Dec'15).

Guest lectures at Stanford graduate courses: CS224D (May'16), CS224N (Nov'15).

Reviewers for ICLR, ACL, EMNLP, NAACL.

❖ Qualifications

Major languages: Vietnamese, Matlab, Python, Java, Cuda C/C++, R, Chinese.

Libraries & tools: TensorFlow, Caffe, Theano, Stanford CoreNLP, Phrasal, Moses, scikit-learn.