DANI YOGATAMA

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PROFESSIONAL EXPERIENCE

DeepMind, London, UK
Staff Research Scientist — April 2019–present
Senior Research Scientist — April 2017–March 2019
Research Scientist — March 2016–March 2017

Baidu Research AI Lab, Sunnyvale, CA, USA
Research Scientist — August 2015–March 2016

Google Research, Mountain View, CA, USA
Software Engineering Intern — June 2014–September 2014
Software Engineering Intern — June 2013–September 2013

EDUCATION

Carnegie Mellon University
Ph.D. and M.S. in Language Technologies — September 2010–August 2015
Language Technologies Institute
School of Computer Science
Advisor: Noah A. Smith

The University of Tokyo
M.S. in Information Science and Technology — October 2008–September 2010
Department of Creative Informatics
Graduate School of Information Science and Technology
Advisor: Kumiko Tanaka-Ishii

Non-degree research student — April 2008–September 2008
Department of Creative Informatics
Graduate School of Information Science and Technology

Institut Teknologi Bandung, Indonesia
Sarjana Teknik (B. Eng.) with honors, early graduation — August 2004–March 2008
Department of Informatics
School of Electrical Engineering and Informatics

PUBLICATIONS

Episodic Memory in Lifelong Language Learning.
Cyprien de Masson d'Autume, Sebastian Ruder, Lingpeng Kong, and **Dani Yogatama**.
In *Proceedings of the Conference on Neural Information Processing Systems*.
Vancouver, Canada, December 2019. **NeurIPS 2019**

Achieving Verified Robustness to Symbol Substitutions via Interval Bound Propagation.
Po-Sen Huang, Robert Stanforth, Johannes Welbl, Chris Dyer, **Dani Yogatama**, Sven Gowal, Krishnamurthy Dvijotham, and Pushmeet Kohli.
In *Proceedings of the Conference on Empirical Methods in Natural Language Processing*.
Hong Kong, China, November 2019. **EMNLP 2019**

A Mutual Information Maximization Perspective of Language Representation Learning.
Lingpeng Kong, Cyprien de Masson d'Autume, Wang Ling, Lei Yu, Zihang Dai, and **Dani Yogatama**.
arXiV, October 2019. **arXiv 2019**

On the Cross-Lingual Transferability of Monolingual Representations.
Mikel Artetxe, Sebastian Ruder, and **Dani Yogatama**.
arXiV, October 2019. **arXiv 2019**

AlphaStar: Grandmaster Level in StarCraft II using Multi-agent Reinforcement Learning.
Oriol Vinyals, Igor Babuschkin, Wojciech Czarnecki, Michael Mathieu, Andrew Dudzik, Junyoung Chung, David Choi, Richard Powell, Timo Ewalds, Petko Georgiev, Junhyuk Oh, Dan Horgan, Manuel Kroiss, Ivo Danihelka, Aja Huang, Laurent Sifre, Trevor Cai, John Agapiou, Max Jaderberg, Alexander Vezhnevets, Remi Leblond, Tobias Pohlen, Valentin Dalibard, David Budden, Yury Sulsky, James Molloy, Tom Paine, Caglar Gulcehre, Ziyu Wang, Tobias Pfaff, Yuhuai Wu, Roman Ring, **Dani Yogatama**, Dario Wunsch, Katrina McKinney, Oliver Smith, Tom Schaul, Timothy Lillicrap, Koray Kavukcuoglu, Demis Hassabis, Chris Apps, David Silver.
Nature, October 2019. **Nature 2019**

Jointly Learning Sentence Embeddings and Syntax with Unsupervised Tree-LSTMs.
Jean Maillard, Stephen Clark, and **Dani Yogatama**.
Journal of Natural Language Engineering, 25(4):433–449, July 2019. **JNLE 2019**

Variational Smoothing in Recurrent Neural Network Language Models.
Lingpeng Kong, Gabor Melis, Wang Ling, Lei Yu, and **Dani Yogatama**.
In *Proceedings of the International Conference on Learning Representations*.
New Orleans, LA, USA, May 2019. **ICLR 2019**

Learning and Evaluating General Linguistic Intelligence.
Dani Yogatama, Cyprien de Masson d'Autume, Jerome Connor, Tomas Kocisky, Mike Chrzanowski, Lingpeng Kong, Angeliki Lazaridou, Wang Ling, Lei Yu, Chris Dyer, and Phil Blunsom.
arXiv 1901.11373, January 2019. **arXiv 2019**

LSTMs Can Learn Syntax-Sensitive Dependencies Well, but Modeling Structure Makes Them Better.
Adhiguna Kuncoro, Chris Dyer, John Hale, **Dani Yogatama**, Stephen Clark, Phil Blunsom.
In *Proceedings of the Annual Meeting of the Association for Computational Linguistics*.
Melbourne, Australia, July 2018. **ACL 2018**

Memory Architectures in Recurrent Neural Network Language Models.
Dani Yogatama, Yishu Miao, Gabor Melis, Wang Ling, Adhiguna Kuncoro, Chris Dyer, and Phil Blunsom.
In *Proceedings of the International Conference on Learning Representations*.
Vancouver, Canada, April 2018. **ICLR 2018**

Program Induction for Rationale Generation: Learning to Solve and Explain Algebraic Word Problems.
Wang Ling, **Dani Yogatama**, Chris Dyer, and Phil Blunsom.
In *Proceedings of the Annual Meeting of the Association for Computational Linguistics*.
Vancouver, Canada, July 2017. **ACL 2017**

Learning to Compose Words into Sentences with Reinforcement Learning.
Dani Yogatama, Phil Blunsom, Chris Dyer, Edward Grefenstette, and Wang Ling.
In *Proceedings of the International Conference on Learning Representations*.
Toulon, France, April 2017. **ICLR 2017**

Generative and Discriminative Text Classification with Recurrent Neural Networks.
Dani Yogatama, Chris Dyer, Wang Ling, and Phil Blunsom.
arXiv 1703.01898, March 2017. **arXiv 2017**

End-to-End Speech Recognition in English and Mandarin.
Dario Amodei, Rishita Anubhai, Eric Battenberg, Carl Case, Jared Casper, Bryan Catanzaro, Jing-

dong Chen, Mike Chrzanowski, Adam Coates, Greg Diamos, Erich Elsen, Jesse Engel, Linxi Fan, Christopher Fougner, Awni Y. Hannun, Billy Jun, Tony Han, Patrick LeGresley, Xiangang Li, Libby Lin, Sharan Narang, Andrew Y. Ng, Sherjil Ozair, Ryan Prenger, Sheng Qian, Jonathan Raiman, Sanjeev Satheesh, David Seetapun, Shubho Sengupta, Chong Wang, Yi Wang, Zhiqian Wang, Bo Xiao, Yan Xie, **Dani Yogatama**, Jun Zhan, and Zhenyao Zhu.
In *Proceedings of the International Conference on Machine Learning*.
New York, NY, USA, July 2016. **ICML 2016**

Lookahead Convolution Layer for Unidirectional Recurrent Neural Networks.
Chong Wang*, **Dani Yogatama***, Adam Coates, Tony Han, Awni Hannun, and Bo Xiao.
In *Proceedings of the International Conference on Learning Representations — Workshop Track*.
San Juan, Puerto Rico, May 2016. **ICLR Workshop 2016**

A Sparse and Adaptive Prior for Time-Dependent Model Parameters.
Dani Yogatama, Bryan R. Routledge, and Noah A. Smith.
In *Proceedings of the NIPS Time Series Workshop*.
Montreal, Canada, December 2015. **NIPS Time Series Workshop 2015**

Extractive Summarization by Maximizing Semantic Volume.
Dani Yogatama, Fei Liu, and Noah A. Smith.
In *Proceedings of the Conference on Empirical Methods in Natural Language Processing*.
Lisbon, Portugal, September 2015. **EMNLP 2015**

Bayesian Optimization of Text Representations.
Dani Yogatama, Lingpeng Kong, and Noah A. Smith.
In *Proceedings of the Conference on Empirical Methods in Natural Language Processing*.
Lisbon, Portugal, September 2015. **EMNLP 2015**

Learning Word Representations with Hierarchical Sparse Coding.
Dani Yogatama, Manaal Faruqui, Chris Dyer, and Noah A. Smith.
In *Proceedings of the International Conference on Machine Learning*.
Lille, France, July 2015. **ICML 2015**

Embedding Methods for Context Dependent Fine Grained Entity Type Classifications.
Dani Yogatama, Dan Gillick, and Nevena Lazic.
In *Proceedings of the Annual Meeting of the Association for Computational Linguistics*.
Beijing, China, July 2015. **ACL 2015**

Sparse Binary Word Vector Representations.
Manaal Faruqui, Yulia Tsvetkov, **Dani Yogatama**, Chris Dyer, and Noah A. Smith.
In *Proceedings of the Annual Meeting of the Association for Computational Linguistics*, Beijing, China, July 2015. **ACL 2015**

Making the Most of Bag of Words: Sentence Regularization with Alternating Direction Method of Multipliers.
Dani Yogatama and Noah A. Smith.
In *Proceedings of the International Conference on Machine Learning*.
Beijing, China, June 2014. **ICML 2014**

Linguistic Structured Sparsity in Text Categorization.
Dani Yogatama and Noah A. Smith.
In *Proceedings of the Annual Meeting of the Association for Computational Linguistics*.
Baltimore, MD, USA, June 2014. **ACL 2014**

Dynamic Language Models for Streaming Text.
Dani Yogatama, Chong Wang, Bryan R. Routledge, Noah A. Smith, and Eric P. Xing.
Transactions of the Association for Computational Linguistics, 2:181–192, April 2014. **TACL 2014**

Efficient Transfer Learning Method for Automatic Hyperparameter Tuning.
Dani Yogatama and Gideon Mann.
In *Proceedings of the International Conference on Artificial Intelligence and Statistics*.
Reykjavik, Iceland, April 2014. **AISTATS 2014**

A Penny for Your Tweets: Campaign Contributions and Capitol Hill Microblogs.
Tae Yano, **Dani Yogatama**, and Noah A. Smith.
In *Proceedings of the International AAAI Conference on Web and Social Media*.
Boston, MA, USA, July 2013. **ICWSM 2013**

A Probabilistic Model for Canonicalizing Named Entity Mentions.
Dani Yogatama, Yanchuan Sim, and Noah A. Smith.
In *Proceedings of the Annual Meeting of the Association for Computational Linguistics*.
Jeju, South Korea, July 2012. **ACL 2012**

Predicting a Scientific Community's Response to an Article.
Dani Yogatama, Michael Heilman, Brendan O'Connor, Chris Dyer, Bryan R. Routledge, and Noah A. Smith.
In *Proceedings of the Conference on Empirical Methods in Natural Language Processing*.
Edinburgh, UK, July 2011. **EMNLP 2011**

Part-of-Speech Tagging for Twitter: Annotation, Features, and Experiments.
Kevin Gimpel, Nathan Schneider, Brendan O'Connor, Dipanjan Das, Daniel Mills, Jacob Eisenstein, Michael Heilman, **Dani Yogatama**, Jeffrey Flanigan, and Noah A. Smith.
In *Proceedings of the Annual Meeting of the Association for Computational Linguistics*.
Portland, OR, USA, June 2011. **ACL 2011**

Multilingual Spectral Clustering Using Document Similarity Propagation.
Dani Yogatama and Kumiko Tanaka-Ishii.
In *Proceedings of the Conference on Empirical Methods in Natural Language Processing*.
Singapore, Singapore, August 2009. **EMNLP 2009**

INVITED TALKS

Keynote Speaker, Deep Learning Day Japan. Tokyo, Japan. January 2018
Structured Sequential Models.

ICML Workshop on Learning to Generate Natural Language. Sydney, Australia. August 2017
Latent Structures in Natural Language Generation.

Distinguished Lecture Program, KU Leuven. Leuven, Belgium. May 2017
Learning Deep Representations in Natural Language Processing.

University of Cambridge. Cambridge, UK. March 2017
Learning Hierarchical Word and Sentence Representations.

UNC Chapel Hill. Chapel Hill, NC, USA. February 2016
Learning to Represent Language: Embeddings and Optimization.

University of Toronto. Toronto, Canada. February 2016
Learning to Represent Language: Embeddings and Optimization.

Toyota Technological Institute at Chicago. Chicago, IL, USA. January 2016
Learning to Represent Language: Embeddings and Optimization.

Stony Brook University. Stony Brook, NY, USA. December 2015
Learning to Represent Language: Embeddings and Optimization.

Google Research. New York, NY, USA. May 2015
Bring Your Own Model: Model-Agnostic Improvements in NLP.

Facebook AI Research. New York, NY, USA. April 2015
Bring Your Own Model: Model-Agnostic Improvements in NLP.

University of Massachusetts, Amherst. Amherst, MA, USA. April 2015
Bring Your Own Model: Model-Agnostic Improvements in NLP.

Allen Institute for Artificial Intelligence. Seattle, WA, USA. April 2015.
Bring Your Own Model: Model-Agnostic Improvements in NLP.

Carnegie Mellon University-Qatar. Doha, Qatar. October 2014
Linguistic structured sparsity in text categorization.

Google PhD Intern Research Conference. Mountain View, CA, USA. June 2014
Learning word representations with hierarchical sparse coding.

Carnegie Mellon University Machine Learning Lunch. Pittsburgh, PA, USA, October 2012.
Time-dependent model parameters.

Text as Data Conference, Northwestern University. Evanston, IL, USA. March 2011
Time-series dynamics of ideas: Predicting text production and impact.

TEACHING EXPERIENCE

Tutorial at the *Conference of the European Chapter of the Association for Computational Linguistics*.
Structured Sparsity in Natural Language Processing: Models, Algorithms and Applications.
With Andre F. T. Martins, Mario A. T. Figueiredo, and Noah A. Smith. EACL 2014

Teaching assistant for 10-701/15-781 Machine Learning course.
Prof. Barnabas Poczos and Prof. Aarti Singh. Spring 2014

Teaching assistant for 11-411/11-611 Natural Language Processing course.
Prof. Noah A. Smith. Spring 2013

PATENTS, FELLOWSHIPS, AND AWARDS

US 2017/0148431 A1. End-to-End Speech Recognition. May 2017
Bryan Catanzaro, Jingdong Chen, Mike Chrzanowski, Erich Elsen, Jesse Engel, Christopher Fougner, Xu Han, Awni Hannun, Ryan Prenger, Sanjeev Satheesh, Shubhabrata Sengupta, **Dani Yogatama**, Chong Wang, Jun Zhan, Zhenyao Zhu, Dario Amodei

US 2017/0148433 A1. Deployed End-to-End Speech Recognition. May 2017
Bryan Catanzaro, Jingdong Chen, Mike Chrzanowski, Erich Elsen, Jesse Engel, Christopher Fougner, Xu Han, Awni Hannun, Ryan Prenger, Sanjeev Satheesh, Shubhabrata Sengupta, **Dani Yogatama**, Chong Wang, Jun Zhan, Zhenyao Zhu, Dario Amodei

Google Cloud Platform award 2015
10,000 USD in Google Cloud Platform credit (with Noah A. Smith).

ICML student travel award 2014

Japanese government (Monbukagakusho: MEXT) scholarship April 2008 - September 2010
With a recommendation from the Embassy of Japan in Indonesia.

SERVICE

Journal Reviewing
Elite reviewer (member of the standing review committee) for the journal Transactions of the Association for Computational Linguistics (2014–present), IEEE Transactions on Pattern Analysis and Machine Intelligence (2016), Journal of Artificial Intelligence Research (2018–2019).

Conference Area Chair
ICLR (2020).

Conference Program Committee
NeurIPS (2017–2019), ACL (2015–2019), ICML (2018–2019), EMNLP (2015–2019), ICLR (2017–2019), WWW (2018), IJCAI (2016), NAACL (2015–2016), AISTATS (2014), EACL (2014), CoNLL (2013).

Organizers
The Second Southeast Asia Machine Learning School, Vietnam. June 2020
The First Southeast Asia Machine Learning School, Depok, Indonesia. July 2019
CL+NLP Lunch Seminar at Carnegie Mellon University. August 2012–May 2014.

ADVISING

Lingpeng Kong, Research Scientist, DeepMind. 2018–present

Kris Cao, Research Scientist, DeepMind. 2018–present

Cyprien de Masson d'Autume, Research Engineer, DeepMind. 2018–present

Mikel Artetxe, Research Intern, DeepMind. 2019

Anna Potapenko, Research Engineer, DeepMind. 2019

Mike Chrzanowski, Research Engineer, DeepMind. 2018

Jerome Connor, Research Engineer, DeepMind. 2018

Yishu Miao, Research Intern, DeepMind. 2017

Bill McDowell, Research Programmer, Carnegie Mellon University. 2014

REFERENCES

Noah A. Smith
Professor of Computer Science and Engineering
University of Washington
nasmith@cs.washington.edu

Chris Dyer
Senior Staff Research Scientist
DeepMind
cdyer@google.com

Kyunghyun Cho
Associate Professor
New York University
kyunghyun.cho@nyu.edu