RICHARD YUANZHE PANG

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Remark Updated on April 2, 2021.

RESEARCH INTERESTS Natural language processing and machine learning. Specifically, I am excited about (1) machine learning and generation including neural machine translation, controlled text generation, RL in generation, etc.; (2) structured prediction learning and inference algorithms; (3) memories in NLP; and (4) language understanding.

EDUCATION

Courant Institute of Mathematical Sciences

New York University, New York, New York, USA September 2019 –

Ph.D. student in Computer Science Advisors: He He, Kyunghyun Cho

The University of Chicago, Chicago, Illinois, USA

September 2015 – June 2019

B.S. in Computer Science (departmental honors), B.S. in Mathematics, B.A. in Statistics Cumulative GPA: 3.85/4.00; Research advisor since September 2017: Kevin Gimpel

MORE RESEARCH EXPERIENCE Google Research New York

May 2020 - August 2020

Research Intern

Host team: Cong Yu, Adam Lelkes, Vinh Tran

Toyota Technological Institute at Chicago (TTIC) June 2018 – September 2018

Summer Visiting Student; Host: Kevin Gimpel

PUBLICATIONS

Richard Yuanzhe Pang, He He. **Text Generation by Learning from Demonstrations**. In *Proceedings of ICLR 2021*.

Lifu Tu, Richard Yuanzhe Pang, Kevin Gimpel. Improving Joint Training of Inference Networks and Structured Prediction Energy Networks. In *Proceedings of EMNLP 2020 Workshop on Structured Prediction for NLP (SPNLP)*. Spotlight paper.

Sean Welleck, Ilia Kulikov, Jaedeok Kim, Richard Yuanzhe Pang, Kyunghyun Cho. Consistency of a Recurrent Language Model With Respect to Incomplete Decoding. In *Proceedings of EMNLP 2020*. Also appearing in the non-archival *DeepMath 2020*.

Lifu Tu, Richard Yuanzhe Pang, Sam Wiseman, Kevin Gimpel. **ENGINE: Energy-Based Inference Networks for Non-Autoregressive Machine Translation**. In *Proceedings of ACL 2020*.

Yada Pruksachatkun, Jason Phang, Haokun Liu, Phu Mon Htut, Xiaoyi Zhang, Richard Yuanzhe Pang, Clara Vania, Katharina Kann, Samuel R. Bowman. Intermediate-Task Transfer Learning with Pretrained Language Models: When and Why Does It Work?. In *Proceedings of ACL 2020*.

Richard Yuanzhe Pang, Kevin Gimpel. Unsupervised Evaluation Metrics and Learning Criteria for Non-Parallel Textual Transfer. In *Proceedings of EMNLP 2019 Workshop on Neural Generation and Translation (WNGT)*.

Richard Yuanzhe Pang. The Daunting Task of Real-World Textual Style Transfer Auto-Evaluation. Extended abstract in *EMNLP 2019 Workshop on Neural Generation and Translation (WNGT)*, abstract in *Proceedings of EMNLP 2019 Workshop on Noisy User-generated Text (W-NUT)*.

RESEARCH PRESENTATIONS

- 5-min talk and poster presentation on *Text Generation by Learning from Demonstrations*; ICLR 2021; May 2021
- Invited talk on structured prediction; Bank of New York Mellon in New York, USA; September 2020
- Talk titled Text Generation by Offline RL; Google Research New York; July 2020
- Poster presentation and lightning talk on *The Daunting Task of Real-World Textual Style Transfer Auto-Evaluation*; EMNLP 2019 WNGT workshop (poster) and W-NUT workshop (lightning talk) in Hong Kong, China; November 2019
- Poster presentation on Unsupervised Evaluation Metrics and Learning Criteria for Non-Parallel Textual Transfer; EMNLP 2019 WNGT workshop in Hong Kong, China; November 2019
- Poster presentation on Learning Criteria and Evaluation Metrics for Textual Transfer between Non-Parallel Corpora; NAACL 2019 NeuralGen workshop in Minneapolis, USA; June 2019
- Talk titled Learning Approximate Inference Networks and Structured Prediction Energy Networks; Midwest Speech and Language Days (MSLD) 2019 in Chicago, USA; May 2019
- Poster presentation on Learning Criteria and Evaluation Metrics for Textual Transfer between Non-Parallel Corpora; UChicago STEM Research Symposium in Chicago, USA; October 2018

Professional Activities

As a member in the program committee / as a reviewer:

- ACL (2021), EMNLP (2021), NeurIPS (2021).
- EMNLP workshops (2021).

Major Honors and Funding

EMNLP and WNGT Student Travel Scholarship

October 2019

• 1000 dollars of scholarship for travel to EMNLP-IJCNLP 2019

New York University Henry M. MacCracken Fellowship

September 2019

• Full funding support for first five years of doctoral study (no teaching obligation)

NAACL Scholarship for 2018 JSALT Summer School

June 2018

• Awarded full scholarship (6 recipients) by the North American Chapter of the Association for Computational Linguistics for participation in 2018 Jelinek Memorial Workshop on Speech and Language Technology Summer School at Johns Hopkins University

University of Chicago Jeff Metcalf Fellowship

April 2018

• Received ~ 4300 dollars of funding for Summer 2018 research

Award from Citadel and Correlation One

May 2017

 $\bullet\,$ Our team of 4 (out of 150 teams) was awarded 20000 dollars for winning the 2017 Chicago Data Open

TEACHING (NYU)	Fall 2020 Section Leader, DS-GA 1008: Deep Learning (Cho, LeCun)
TEACHING (UCHICAGO)	Spring 2017 Course Assistant, MATH 15910: Intro to Proofs in Analysis Winter 2017 Course Assistant, MATH 15910: Intro to Proofs in Analysis Winter 2017 Grader, CMSC 15200: Intro to Computer Science II Autumn 2016 Teaching Assistant, MATH 15300: Calculus III
SELECTED COURSEWORK (UCHICAGO; ML/NLP THEMED)	 □ Machine Learning and Large-Scale Data Analysis (grad level, Lafferty) □ Machine Learning (grad level, Kondor; more emphasis on theories of learning) □ Statistical Machine Learning (grad level, Shakhnarovich) □ Natural Language Processing (grad level, Gimpel) □ Spectral Techniques in Machine Learning (grad level, Stratos)
OTHER HONORS	 □ General Honors of the University of Chicago (2019) □ Departmental Honors (computer science) of the University of Chicago (2019) □ Dean's List of the College (2015-16, 16-17, 17-18, 18-19) □ Illinois Tech Association 2017 Tech Challenge Finalist (top 8%)
References	He He hehe@cs.nyu.edu
	Assistant Professor in the Department of Computer Science (Courant) and the Center for Data Science at New York University
	60 5th Ave, New York, NY 10011, USA
	Kyunghyun Cho kyunghyun.cho@nyu.edu
	Associate Professor in the Department of Computer Science (Courant) and the Center for Data Science at New York University
	60 5th Ave, New York, NY 10011, USA
	Kevin Gimpel kgimpel@ttic.edu
	Assistant Professor at Toyota Technological Institute at Chicago (TTIC) and Assistant Professor in the Department of Computer Science at the University of Chicago 6045 S. Kenwood Ave., Chicago, IL 60637, USA
	Samuel Bowman bowman@nyu.edu
	Assistant Professor in the Department of Linguistics, the Center for Data Science, and the Department of Computer Science (Courant) at New York University

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