Richard Yuanzhe Pang

Contact

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Website

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Remark

Updated on June 1, 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

Additional Research Experience

Google Brain — June 2021 – August 2021

Research Intern

Host team: Denny Zhou, Xinying Song, Le Hou, Yuexin Wu, Xiaodan Song

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*, Adam D. Lelkes*, Vinh Q. Tran*, Cong Yu. **AgreeSum: Agreement-Oriented Multi-Document Summarization**. In *Findings of ACL 2021*.

Clara Vania*, Phu Mon Htut*, William Huang*, Dhara Mungra, Richard Yuanzhe Pang, Jason Phang, Haokun Liu, Kyunghyun Cho, Samuel R. Bowman. **Comparing Test Sets with Item Response Theory**. In *Proceedings of ACL 2021*.

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 (external)

- Talk titled *Text Generation by Learning from Demonstrations*; Samsung workshop (with together with Mila - Quebec AI Institute and New York University); June 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 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

Research Presentations (in conferences with associated proceedings)

- 5-min talk and poster presentation on *Text Generation by Learning from Demonstrations*; ICLR 2021; May 2021
- 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

Professional Activities

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

- ACL (2021), EMNLP (2021), NeurIPS (2021).
- Workshops: NILLI (at EMNLP 2021).

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

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

- Our team of 4 (out of ∼600 participants) was awarded 20000 dollars for winning the 2017 Chicago Data Open

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%)

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)

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

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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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