

Tianxiao Shen

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Education

Massachusetts Institute of Technology 2016.9 – 2022.5 (expected)

Ph.D., Electrical Engineering and Computer Science

Advisors: Regina Barzilay and Tommi Jaakkola

GPA: 5.0/5.0

Tsinghua University 2012.9 – 2016.6

B.Eng., Computer Science and Technology

Special Pilot CS Class (Yao Class), supervised by Andrew C. Yao (Turing Award 2000)

GPA: 93.8/100

Massachusetts Institute of Technology 2015.1 – 2015.5

Exchange student, Electrical Engineering and Computer Science

Undergraduate Research Opportunities Program (UROP) supervisor: Regina Barzilay

GPA: 5.0/5.0

Research Interests

Natural Language Processing, Machine Learning

Experience

Princeton NLP Group 2020.6 – 2020.9

Visiting Student

Host: Karthik Narasimhan

Facebook AI Research 2018.6 – 2018.8

Research Intern

Mentor: Marc'Aurelio Ranzato

Microsoft Research Asia 2016.2 – 2016.7

Research Intern, Knowledge Computing Group

Mentor: Chin-Yew Lin

Microsoft Research Asia 2014.6 – 2014.12

Research Intern, Visual Computing Group

Mentor: Jingdong Wang

Publications

▪ Text Style Transfer with Confounders

Tianxiao Shen, Regina Barzilay, Tommi Jaakkola

International Conference on Learning Representations (ICLR), 2022. In submission

- **Controlling Directions Orthogonal to a Classifier**

Yilun Xu, Hao He, Tianxiao Shen, Tommi Jaakkola

International Conference on Learning Representations (ICLR), 2022. *In submission*

- **Blank Language Models**

Tianxiao Shen*, Victor Quach*, Regina Barzilay, Tommi Jaakkola (*: Equal contribution)

Empirical Methods in Natural Language Processing (EMNLP), 2020.

- **Educating Text Autoencoders: Latent Representation Guidance via Denoising**

Tianxiao Shen, Jonas Mueller, Regina Barzilay, Tommi Jaakkola

International Conference on Machine Learning (ICML), 2020.

- **Learning to Make Generalizable and Diverse Predictions for Retrosynthesis**

Benson Chen, Tianxiao Shen, Regina Barzilay, Tommi Jaakkola

Preprint, 2019.

- **Mixture Models for Diverse Machine Translation: Tricks of the Trade**

Tianxiao Shen*, Myle Ott*, Michael Auli, Marc’Aurelio Ranzato (*: Equal contribution)

International Conference on Machine Learning (ICML), 2019. *Long talk*

- **Style Transfer from Non-Parallel Text by Cross-Alignment**

Tianxiao Shen, Tao Lei, Regina Barzilay, Tommi Jaakkola

Neural Information Processing Systems (NIPS), 2017. *Spotlight*

- **Making Dependency Labeling Simple, Fast and Accurate**

Tianxiao Shen, Tao Lei, Regina Barzilay

North American Chapter of the Association for Computational Linguistics (NAACL), 2016.

Invited Talks

- **Text Style Transfer with Confounders**

NetMIT, Oct 2021

IBM, Sep 2021

MIT JRP on “Next Generation NLP Technologies for Low Resource Tasks”, Jun 2021

- **Blank Language Models**

AI Time, Dec 2020

Princeton NLP, Aug 2020

MIT Computational Psycholinguistics Lab, Jul 2020

- **Educating Text Autoencoders: Latent Representation Guidance via Denoising**

MIT MLTea, Jul 2020

IIIS-Haihua Frontier Seminar Series, Tsinghua University, Jul 2019

- **Mixture Models for Diverse Machine Translation**

AI Research Week, MIT-IBM Watson AI Lab, Sep 2019

Microsoft Research AI Breakthroughs workshop, Sep 2019

▪ Language Style Transfer

Harvard Applied Statistics Seminar, Mar 2018

NetMIT, Mar 2018

Twitter Cambridge, Dec 2017

Harvard NLP, Nov 2017

Guest lecture at MIT 6.864 Advanced Natural Language Processing, Nov 2017

MIT Machine Learning Tea, Oct 2017

Service

Conference reviewing: ICML 2019, 2020, 2021, NeurIPS 2019, 2021, ICLR 2021, 2022, AISTATS 2022, CoNLL 2020, AAAI 2019, Workshop on DeepGenStruct at ICLR 2019

Mentoring: Women in Machine Learning workshop at NIPS 2017

Selected Awards and Honors

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| D. E. Shaw Fellowship | 2017 |
| Robert J. Shillman Fellowship | 2016 |
| Microsoft Research Asia Stars of Tomorrow | 2016 |
| WeTech Qualcomm Global Scholarship | 2015 |
| Finalist, Top-Grade Scholarship (10 best undergraduate students a year), Tsinghua University | 2015 |
| 12.9 Scholarship, Tsinghua University | 2015 |
| Chinese Team Candidate (top 6), International Olympiad in Informatics (IOI) | 2012 |
| Best Female Contestant, Silver Medal, Chinese National Olympiad in Informatics (NOI) | 2011 |