YIXUAN SU

Cohere, 51 Great Marlborough St, London W1F 7JT, UK

yixuan@cohere.com ◇ (+44)07579873639 ◇ Personal Page ◇ Google Scholar ◇ Semantic Scholar ◇ Github

WORK EXPERIENCE

Cohere, London, United Kingdom   May 2023 - Present
Researcher, Member of Technical Staff
Manager: Patrick Lewis

EDUCATION

University of Cambridge, United Kingdom   Sep 2019 - Present
PhD in Computation, Cognition and Language
Advisor: Prof. Nigel Collier
Language Technology Lab

University of Cambridge, United Kingdom   Sep 2017 - Sep 2018
MPhil in Machine Learning, Speech and Language Technology
Department of Engineering
Adwarded with Distinction Degree (Top 5%)

Beijing Institute of Technology, China   Sep 2013 - July 2017
Bachelor of Science
Department of Engineering

RESEARCH EXPERIENCE

Amazon AWS AI, Seattle, US (Remote)   May 2021 - Oct 2021
Research Scientist Intern
Advised by Lei Shu, Yi Zhang

Apple Research, Cambridge, UK   Sep 2020 - Dec 2020
Research Scientist Intern
Advised by David Vandyke

Tencent AI Lab, Shenzhen, China   Sep 2018 - Aug 2019
Research Intern
Advised by Yan Wang

Microsoft Research Asia, Beijing, China   Feb 2017 - July 2017
Research Intern
Advised by Lei Ji

RESEARCH COLLABORATION

Danqi Chen, Princeton University   Summer 2022

Dani Yogatama, DeepMind   Spring 2022 - Summer 2022

Lingpeng Kong, University of Hong Kong   Spring 2022 - Summer 2022

SELECTED PUBLICATIONS

[1] **PandaGPT: One Model To Instruction-Follow Them All**
Yixuan Su, Tian Lan, Huayang Li, Jialu Xu, Yan Wang, Deng Cai

[2] **OpenAlpaca: A Fully Open-Source Instruction-Following Model Based On OpenLLaMA**
Yixuan Su, Tian Lan, Deng Cai

[3] **[TMLR'23] Contrastive Search Is What You Need For Neural Text Generation**
Yixuan Su, Nigel Collier
In Transactions on Machine Learning Research (TMLR 2023).

[4] **Language Models Can See: Plugging Visual Controls in Text Generation**
Yixuan Su, Tian Lan, Yahui Liu, Fangyu Liu, Dani Yogatama, Yan Wang, Lingpeng Kong, Nigel Collier
On Arxiv Preprint (arXiv:2205.02655)

[5] **[NeurIPS'22] A Contrastive Framework for Neural Text Generation**
Yixuan Su, Tian Lan, Yan Wang, Dani Yogatama, Lingpeng Kong, Nigel Collier.
In Advances in Neural Information Processing Systems (NeurIPS 2022 **Spotlight**).

[6] **[NAACL'22-Findings] TaCL: Improving BERT Pre-training with Token-aware Contrastive Learning**
Yixuan Su, Fangyu Liu, Zaiqiao Meng, Tian Lan, Lei Shu, Ehsan Shareghi, Nigel Collier.
In Findings of the North American Chapter of Association for Computational Linguistics (NAACL 2022).

[7] **[ACL'22] Multi-Task Pre-Training for Plug-and-Play Task-Oriented Dialogue System**
Yixuan Su, Lei Shu, Elman Mansimov, Arshit Gupta, Deng Cai, Yi-An Lai, Yi Zhang.
In Proceedings of the Annual Meeting of the Association for Computational Linguistics (ACL 2022).

FULL PUBLICATIONS (IN CHRONOLOGICAL ORDER)

[1] **PandaGPT: One Model To Instruction-Follow Them All**
Yixuan Su, Tian Lan, Huayang Li, Jialu Xu, Yan Wang, Deng Cai

[2] **OpenAlpaca: A Fully Open-Source Instruction-Following Model Based On OpenLLaMA**
Yixuan Su, Tian Lan, Deng Cai

[3] **[TMLR'23] Contrastive Search Is What You Need For Neural Text Generation**
Yixuan Su, Nigel Collier
In Transactions on Machine Learning Research (TMLR 2023).

[4] **[GEM'22] Plug-and-Play Recipe Generation with Content Planning**
Yinhong Liu, Yixuan Su, Ehsan Shareghi, Nigel Collier
In Proceedings of the 2nd Workshop on Natural Language Generation, Evaluation, and Metrics (GEM 2022)

[5] **Momentum Decoding: Open-ended Text Generation As Graph Exploration**
Tian Lan*, Yixuan Su*, Shuhang Liu, Heyan Huang, Xian-Ling Mao
On Arxiv Preprint (arXiv:2212.02175)

[6] **An Empirical Study On Contrastive Search And Contrastive Decoding For Open-ended Text Generation**
Yixuan Su, Jialu Xu
On Arxiv Preprint (arXiv:2211.10797)

[7] **Language Models Can See: Plugging Visual Controls in Text Generation**
Yixuan Su, Tian Lan, Yahui Liu, Fangyu Liu, Dani Yogatama, Yan Wang, Lingpeng Kong, Nigel Collier
On Arxiv Preprint (arXiv:2205.02655)

[8] **[NeurIPS'22] A Contrastive Framework for Neural Text Generation**
Yixuan Su, Tian Lan, Yan Wang, Dani Yogatama, Lingpeng Kong, Nigel Collier.
In Advances in Neural Information Processing Systems (NeurIPS 2022 **Spotlight**).

[9] **[NeurIPS'22] Measuring and Reducing Model Update Regression in Structured Prediction for NLP**
Deng Cai, Elman Mansimov, Yi-An Lai, Yixuan Su, Lei Shu, Yi Zhang.
In Advances in Neural Information Processing Systems (NeurIPS 2022).

[10] **[CIKM'22] From Easy to Hard: A Dual Curriculum Learning Framework for Context-Aware Document Ranking**
Yutao Zhu, Jian-Yun Nie, Yixuan Su, Haonan Chen, Xinyu Zhang, Zhicheng Dou.
In Proceedings of the Conference on Information and Knowledge Management (CIKM 2022).

[11] **[NAACL'22-Findings] TaCL: Improving BERT Pre-training with Token-aware Contrastive Learning**
Yixuan Su, Fangyu Liu, Zaiqiao Meng, Tian Lan, Lei Shu, Ehsan Shareghi, Nigel Collier.
In Findings of the North American Chapter of Association for Computational Linguistics (NAACL 2022).

[12] **[ACL'22] Multi-Task Pre-Training for Plug-and-Play Task-Oriented Dialogue System**
Yixuan Su, Lei Shu, Elman Mansimov, Arshit Gupta, Deng Cai, Yi-An Lai, Yi Zhang.
In Proceedings of the Annual Meeting of the Association for Computational Linguistics (ACL 2022).

[13] **[ACL'22] Rewire-then-Probe: A Contrastive Recipe for Probing Biomedical Knowledge of Pre-trained Language Models**
Zaiqiao Meng, Fangyu Liu, Ehsan Shareghi, Yixuan Su, Charlotte Collins, Nigel Collier.
In Proceedings of the Annual Meeting of the Association for Computational Linguistics (ACL 2022).

[14] **A Survey on Retrieval-Augmented Text Generation**
Huayang Li*, Yixuan Su*, Deng Cai*, Yan Wang*, Lemao Liu*.
On Arxiv Preprint (arXiv:2202.01110)

[15] **Exploring Dense Retrieval for Dialogue Response Selection**
Tian Lan, Deng Cai, Yan Wang, Yixuan Su, Xian-Ling Mao, Heyan Huang.
On Arxiv Preprint (arXiv:2110.06612)

[16] **[EMNLP'21-Findings] Plan-then-Generate: Controlled Data-to-Text Generation via Planning**
Yixuan Su, David Vandyke, Sihui Wang, Yimai Fang, Nigel Collier.
In Findings of Empirical Methods in Natural Language Processing (EMNLP 2021).

[17] **[EMNLP'21-Findings] Few-Shot Table-to-Text Generation with Prototype Memory**
Yixuan Su, Zaiqiao Meng, Simon Baker, Nigel Collier.
In Findings of Empirical Methods in Natural Language Processing (EMNLP 2021).

[18] **[ACL'21] Dialogue Response Selection with Hierarchical Curriculum Learning**
Yixuan Su*, Deng Cai*, Qingyu Zhou, Zibo Lin, Simon Baker, Yunbo Cao, Shuming Shi, Nigel Collier, Yan Wang.
In Proceedings of the Annual Meeting of the Association for Computational Linguistics (ACL 2021).

[19] **[ACL'21-Findings] Keep the Primary, Rewrite the Secondary: A Two-Stage Approach for Paraphrase Generation**

Yixuan Su, David Vandyke, Simon Baker, Yan Wang, Nigel Collier.
In Findings of the Annual Meeting of the Association for Computational Linguistics (ACL 2021).

[20] **[EACL'21] Non-Autoregressive Text Generation with Pre-trained Language Models**
Yixuan Su, Deng Cai, Yan Wang, David Vandyke, Simon Baker, Piji Li, Nigel Collier.
In Proceedings of the European Chapter of the Association for Computational Linguistics (EACL 2021).

[21] **[TASLP'21] Prototype-to-Style: Dialogue Generation with Style-Aware Editing on Retrieval Memory**
Yixuan Su, Yan Wang, Deng Cai, Simon Baker, Anna Korhonen, Nigel Collier.
In IEEE/ACM Transactions on Audio Speech and Language Processing (TASLP 2021).

[22] **Stylistic Dialogue Generation via Information-Guided Reinforcement Learning**
Yixuan Su, Deng Cai, Yan Wang, Simon Baker, Anna Korhonen, Xiaojiang Liu.
On Arxiv Preprint (arXiv:2004.02202)

INVITED TALKS

- January 2023, IR Group, University of Glasgow
- October 2022, NLG Student Webinar, Chinese Information Processing Society of China
- August 2022, MLNLP Webinar
- August 2022, NLP Group, Princeton University
- June 2022, Language Technology Lab, University of Cambridge
- April 2022, NLP Group, University of Washington
- April 2022, Language Team, DeepMind, London, UK
- March 2022, NLP Group, University of Oxford
- March 2022, NLP Group, Nara Institute of Science and Technology
- February 2022, NLP Group, Tencent AI Lab, Shenzhen, China

TEACHING

Computational Linguistics @University of Cambridge (LI18).
Instructor: Prof. Nigel Collier

PROFESSIONAL SERVICE

Program Committee/Reviewer:

- NeurIPS (2023-)
- ACL (2020-)
- EMNLP (2021-)
- EACL (2021-)
- NLPCC (2021-)
- ACL Rolling Review (2021-)