

# YIXUAN SU

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## WORK EXPERIENCE

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<b>Cohere</b> , London, United Kingdom Researcher, Member of Technical Staff	May 2023 - Present
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## EDUCATION

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<b>University of Cambridge, United Kingdom</b> PhD in Computation, Cognition and Language Advisor: Prof. Nigel Collier Language Technology Lab	Sep 2019 - Present
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<b>University of Cambridge, United Kingdom</b> MPhil in Machine Learning, Speech and Language Technology Department of Engineering <b>Adwarded with Distinction Degree (Top 5%)</b>	Sep 2017 - Sep 2018
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<b>Beijing Institute of Technology, China</b> Bachelor of Science Department of Engineering	Sep 2013 - July 2017
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## RESEARCH EXPERIENCE

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<b>Amazon AWS AI</b> , Seattle, US (Remote) Research Scientist Intern <i>Advised by Lei Shu, Yi Zhang</i>	May 2021 - Oct 2021
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<b>Apple Research</b> , Cambridge, UK Research Scientist Intern <i>Advised by David Vandyke</i>	Sep 2020 - Dec 2020
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<b>Tencent AI Lab</b> , Shenzhen, China Research Intern <i>Advised by Yan Wang</i>	Sep 2018 - Aug 2019
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<b>Microsoft Research Asia</b> , Beijing, China Research Intern <i>Advised by Lei Ji</i>	Feb 2017 - July 2017
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## RESEARCH COLLABORATION

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Danqi Chen, Princeton University	Summer 2022
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Dani Yogatama, DeepMind	Spring 2022 - Summer 2022
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Lingpeng Kong, University of Hong Kong	Spring 2022 - Summer 2022
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## SELECTED PUBLICATIONS

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- [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)

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- [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\*, Lema 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

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- 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

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Computational Linguistics @University of Cambridge (LI18).

Instructor: Prof. Nigel Collier

## PROFESSIONAL SERVICE

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Program Committee/Reviewer:

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