Yiren Jian

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▬▬▬ Education

2018-2023   **PhD in Computer Science**, *Dartmouth College*, United States.
Advisor: Lorenzo Torresani (2018-2021), Soroush Vosoughi (2021-)

2015-2017   **Master of Science in Physics**, *The George Washington University*, United States.
Advisor: Chen Zeng

2011-2015   **Bachelor of Science in Physics**, *Huazhong University of Science and Technology*, China.
Thesis Advisor: Yi Xiao

▬▬▬ Work Experience

Summer 2022   **Research Intern**, *Snap Inc.*, Creative Vision at Snap Research.
Advisor: Panos Achlioptas

Summer 2021   **Research Intern**, *NEC Labs America, Inc.*, Machine Learning Department.
Advisor: Renqiang (Martin) Min

▬▬▬ Publications

$^{\#}$ **indicates co-first author,** † **indicates co-corresponding author**.

2023   Knowledge from Large-Scale Protein Contact Prediction Models Can Be Transferred to the Data-Scarce RNA Contact Prediction Task,
Yiren Jian†, *Chongyang Gao, Chen Zeng, Yunjie Zhao and Soroush Vosoughi†*.
arXiv.2302.06120

2023   Evaluating Native-like Structures of RNA-protein Complexes Through the Deep Learning Method,
Chengwei Zeng$^{\#}$, **Yiren Jian**$^{\#}$, *Soroush Vosoughi, Chen Zeng, Yunjie Zhao*.
Nature Communications 14: 1060 2023

2022   Non-Linguistic Supervision for Contrastive Learning of Sentence Embeddings,
Yiren Jian, *Chongyang Gao, Soroush Vosoughi*.
Advances in Neural Information Processing Systems, 35 (NeurIPS)

2022   T-Cell Receptor-Peptide Interaction Prediction with Physical Model Augmented Pseudo-Labeling,
Yiren Jian, *Erik Kruus, Martin Renqiang Min*.
In Proceedings of the 28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)

2022   Embedding Hallucination for Few-shot Language Fine-tuning,
Yiren Jian, *Chongyang Gao, Soroush Vosoughi*.
In Proceedings of the 2022 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL)

2022   Contrastive Learning for Prompt-based Few-shot Language Learners,
Yiren Jian, *Chongyang Gao, Soroush Vosoughi*.
In Proceedings of the 2022 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL)

2022   Label Hallucination for Few-Shot Classification,
Yiren Jian, *Lorenzo Torresani*.
Proceedings of the AAAI Conference on Artificial Intelligence, 36 (AAAI)

2021   MetaPix: Domain Transfer for Semantic Segmentation by Meta Pixel Weighting,
Yiren Jian, *Chongyang Gao*.
Image and Vision Computing, Volume 116, December 2021, 104334

2020	Task Meta-Transfer from Limited Parallel Labels, **Yiren Jian**, *Karim Ahmed, Lorenzo Torresani.* Meta-Learning Workshop, Neural Information Processing Systems (NeurIPS Workshop)
2019	DIRECT: RNA Contact Predictions by Integrating Structural Pattern, **Yiren Jian**, *Xiaonan Wang, Jiadi Qiu, Huiwen Wang, Zhichao Liu, Yunjie Zhao, Chen Zeng.* BMC Bioinformatics, 2019, 20:497
2019	Trace, Machine Learning of Signal Images for Trace-Sensitive Mass Spectrometry: A Case Study from Single-Cell Metabolomics, *Zhichao Liu, Erika P. Portero,* **Yiren Jian**, *Yunjie Zhao, Rosemary M. Onjiko, Chen Zeng, Peter Nemes.* Analytical Chemistry, 2019. 91:5768-57
2018	Design of Tat-activated Cdk9 inhibitor, *Yunjie Zhao, Hao Chen, Chenghang Du,* **Yiren Jian**, *Haotian Li, Yi Xiao, Mohammed Saifuddin, Fatah Kashanchi, and Chen Zeng.* Journal of Peptide Research and Therapeutics, 2019. 25:807-817
2018	Rbind: computational network method to predict the binding sites of RNA molecules, *Kaili Wang[#],* **Yiren Jian**[#], *Huiwen Wang, Chen Zeng and Yunjie Zhao.* Bioinformatics, 2018; 34(18):3131-3136
2017	Computational study of non-catalytic T-loop pocket on CDK proteins for drug development, *Huiwen Wang, Kaili Wang, Zeyu Guan,* **Yiren Jian**, *Ya Jia, Fatah Kashanchi, Chen Zeng, Yunjie Zhao.* Chinese Physics B, 2017. 26(12):32-40
2017	Network analysis reveals the recognition mechanism for dimer formation of bulb-type lectins, *Yunjie Zhao[#],* **Yiren Jian**[#], *Zhichao Liu, Hang Liu, Qin Liu, Chanyou Chen, Zhangyong Li, Lu Wang, H. Howie Huang, Chen Zeng.* Scientific Report, 2017. 7:2876

Graduate Teaching Assistantship

2018, 2021, 2022, 2023	**Machine Learning and Statistical Data Analysis**. Department of Computer Science, Dartmouth College
2019, 2021	**Deep Learning**. Department of Computer Science, Dartmouth College
2015-2016	**University Physics**. Department of Physics, The George Washington University

Profiles

Scholar Page	https://scholar.google.com/citations?hl=en&user=7d2UpTwAAAAJ
Personal Site	https://cs.dartmouth.edu/~yirenjian/
Linkedin	https://www.linkedin.com/in/yiren-jian/
GitHub	https://github.com/yiren-jian