

Siyan (Sylvia) Li

MASTER'S STUDENT · STANFORD UNIVERSITY

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Education

Stanford University

Stanford, CA

MASTER'S IN COMPUTER SCIENCE

2021 - 2023

- GPA: 4.013 / 4.0
- Advisors: Prof. Chris Manning, Prof. Chris Potts
- **Research Areas: Natural Language Processing, Speech, Dialogue Systems, Linguistics**

Georgia Institute of Technology

Atlanta, GA

BS IN COMPUTER SCIENCE

2017 - 2020

- GPA: 3.94 / 4.0
- Threads: People and Intelligence, Dean's List 2017-2020
- **Research Areas: Natural Language Processing, Story Generation, Natural Language Generation, Alignment, Computer Vision, Robotics**

Professional Experience

- Aug. 2021 - present **Research Assistant**, Stanford NLP, STANFORD UNIVERSITY
- Jun. 2022 - **Research Intern**, Affective Computing Group, UNIVERSITY OF SOUTHERN CALIFORNIA
- Sept. 2022
- Sept. 2021 - **Teaching Assistant**, STANFORD UNIVERSITY
- Dec. 2021
- Jan. 2021 - **Research Assistant**, Robotics, Evolution, and Art Lab, IT UNIVERSITY OF COPENHAGEN
- Aug. 2021
- Aug. 2019 - **Research Assistant**, Entertainment Intelligence Lab, GEORGIA TECH
- Dec. 2019
- Jan. 2020 - **Head Teaching Assistant**, GEORGIA TECH
- Dec. 2020
- Summer 2020 **Software Engineering Intern**, AMAZON ROBOTICS
- Aug. 2019 - **Teaching Assistant**, GEORGIA TECH
- Dec. 2019
- Summer 2019 **Research Intern**, Intelligent Control Lab, CARNEGIE MELLON UNIVERSITY
- Aug. 2018 - **Research Assistant**, Healthcare Robotics Lab, GEORGIA TECH
- May 2019

Publications

CONFERENCES AND JOURNALS

- [1] **Siyan Li**, Riley Carlson, and Christopher Potts. Systematicity in GPT-3's Interpretation of Novel English Noun Compounds. In *Findings of EMNLP 2022*, 2022. URL: <https://arxiv.org/abs/2210.09492>.
- [2] Eric Mitchell, Joseph J. Noh, **Siyan Li**, William S. Armstrong, Ananth Agarwal, Patrick Liu, Chelsea Finn, and Christopher D. Manning. Enhancing self-consistency and performance of pretrained language models with nli. In *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP)*. Association for Computational Linguistics, 2022. URL: <https://ericmitchell.ai/concord.pdf>.

- [3] Xiangyu Peng, **Siyan Li**, Sarah Wiegrefe, and Mark Riedl. Inferring the Reader: Guiding Automated Story Generation with Commonsense Reasoning. In *Findings of EMNLP 2022*, 2022. URL: <https://arxiv.org/abs/2105.01311>.
- [4] **Siyan Li**, Ashwin Paranjape, and Christopher Manning. When can I speak? predicting initiation points for spoken dialogue agents. In *Proceedings of the 23rd Annual Meeting of the Special Interest Group on Discourse and Dialogue*, pages 217–224, Edinburgh, UK, September 2022. Association for Computational Linguistics. URL: <https://aclanthology.org/2022.sigdial-1.22>.
- [5] Shyam Sudhakaran, Djordje Grbic, **Siyan Li**, Adam Katona, Elias Najarro, Claire Glanois, and Sebastian Risi. Growing 3D Artefacts and Functional Machines with Neural Cellular Automata. In *Proceedings of the Artificial Life Conference 2021*, volume abs/2103.08737, 2021. URL: <https://arxiv.org/abs/2103.08737>, arXiv: 2103.08737.
- [6] Xiangyu Peng, **Siyan Li**, Spencer Frazier, and Mark Riedl. Reducing non-normative text generation from language models. In *Proceedings of the 13th International Conference on Natural Language Generation*, pages 374–383, Dublin, Ireland, December 2020. Association for Computational Linguistics. URL: <https://aclanthology.org/2020.inlg-1.43>.
- [7] Abulikemu Abuduweili, **Siyan Li**, and Changliu Liu. Adaptable Human Intention and Trajectory Prediction for Human-Robot Collaboration. In *Proceedings of AI-HRI 2019*, volume abs/1909.05089, 2019. URL: <https://arxiv.org/pdf/1909.05089.pdf>.

PEER REVIEWED WORKSHOPS

- [1] Amal Alabdulkarim, **Siyan Li**, and Xiangyu Peng. Automatic story generation: Challenges and attempts. In *Proceedings of the Third Workshop on Narrative Understanding*, pages 72–83, Virtual, June 2021. Association for Computational Linguistics. URL: <https://aclanthology.org/2021.nuse-1.8>, doi:10.18653/v1/2021.nuse-1.8.
- [2] Xiangyu Peng, **Siyan Li**, Sarah Wiegrefe, and Mark Riedl. Inferring the reader: Guiding automated story generation with commonsense reasoning. In *Proceedings of the Third Workshop on Narrative Understanding*, Virtual, June 2021. Arxiv. URL: <https://arxiv.org/pdf/2105.01311.pdf>.

Teaching Experience

Sept. 2021 **CS 103 Mathematical Foundations of Computing**, Teaching Assistant
 - Dec. 2021
 Jan. 2017 - **CS 3600 Introduction to AI**, Teaching Assistant
 Aug. 2020

Mentoring

2022 **Riley D. Carlson**, BS Student, Stanford University

Research Experience

Stanford NLP Group, Stanford University

Stanford, CA

ADVISORS: PROF. CHRIS MANNING, PROF. CHRIS POTTS

Aug. 2021 - Present

- Training deep neural networks to predict dialogue agent utterance initiation points in a continuous manner
- Developing a dialogue manager for more natural-sounding dialogue agents
- Participating in the Amazon Alexa Prize competition
- Probing linguistic knowledge of GPT-3 in the field of noun compounds

Affective Computing Group, University of Southern California

Los Angeles, CA

ADVISOR: PROF. JONATHAN GRATCH

Jun. 2022 - Sept. 2022

- Examining conversational behaviors in human face-to-face multi-issue negotiations
- Conducting statistical analyses between facial expressions during negotiations and various subjective and objective metrics
- Using visual, audio, and lexical features to predict appropriate backchannel opportunities

Robotics, Evolution, and Art Lab, IT University of Copenhagen

Remote

ADVISOR: PROF. SEBASTIAN RISI

Jan. 2021 - Aug. 2021

- Designing web interfaces for interactive evolution of Minecraft structures through Neural Cellular Automata

Entertainment Intelligence Lab, Georgia Tech

Atlanta, GA

ADVISOR: PROF. MARK RIEDL

Aug. 2019 - Dec. 2020

- Utilizing tools such as COMET and VerbNet to enhance the quality of automatic story generation
- Training language models to produce less toxic content
- Gaining experience in conducting online human subject studies

Intelligent Control Lab, Carnegie Mellon University

Pittsburgh, PA

ADVISOR: PROF. CHANGLIU LIU

May. 2019 - Aug. 2019

- Collecting human demonstration data for a human-robot collaborative task
- Using demonstrations to allow robot assistance through predicting human trajectory

Skills

TECHNICAL

- Natural Language Processing, Speech Processing, Machine Learning, Agile Methodologies

PROGRAMMING LANGUAGES

- Python, R, Java, C/C++

FRAMEWORKS AND TOOLS

- Pytorch, scikit-learn, Tensorflow, nltk, Flask, ROS

LANGUAGES

- English, Mandarin, Japanese, Spanish

Professional Activities

ORGANIZER

2022 - 2023 **Stanford NLP Seminar Organizer**, Fall 2022 - Spring 2023

2021 - 2022 **Stanford NLP Lunch Organizer**, Fall 2021 - Spring 2022

SERVICE AND OUTREACH

Jun. 2022 - **Reviewer**, EMNLP 2022

- Reviewer for the Ethics track and the Dialogue and Interactive Systems track.

Dec. 2020 - **Volunteer**, Women in ML (WiML)

- Social media outreach and website design.

Present

Miscellaneous

THEATER

Aug. 2017 - **DramaTech Theatre, Georgia Tech**

Atlanta, GA

- Performing member of Let's Try This! Improv troupe
- Marketing Director of DramaTech: 2018 - 2019
- Costumes designer, props designer, set designer

Media Coverage

Is It My Turn Yet? Teaching a Voice Assistant When to Speak. [Stanford HAI](#).

References

- Mark O. Riedl (Undergraduate Advisor), Professor, Georgia Institute of Technology, riedl@cc.gatech.edu
- Christopher D. Manning (Master's Advisor), Professor, Stanford University, manning@cs.stanford.edu
- Christopher G. Potts (Master's Advisor), Professor, Stanford University, cgpotts@stanford.edu
- Jonathan Gratch, Professor, University of Southern California, gratch@ict.usc.edu