

Jiasheng Gu

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Research Interests I am interested in natural language processing, machine learning, and artificial intelligence, with a particular interest in text generation, trustworthy AI models, and few-shot NLP.

Education **University of Southern California** Los Angeles, CA
M.S. in Machine Learning and Data Science Aug. 2021 - May. 2023
GPA: 4.0

Xidian University Xian, Shaanxi
B.E. in Telecommunications Engineering Sep. 2017 - Jun. 2021
GPA: Top 10%

Publications **Few-shot Code Generation via Rule-AI Co-learning from Document**
Jiasheng Gu, Zifan Nan, Dongkuan Xu, Xipeng shen
In prep, ACL

Robustness of learning from task instructions
Jiasheng Gu, Hanzi Xu, Liangyu Nie, Wenpeng Yin
Submitted, EACL

Artificial Intelligence Related Techniques Used in Recent Bio-medical Publications
Jiasheng Gu, Lili Wang, Soroush Vosoughi
Submitted, Journal of Medical Internet Research (JMIR)

Research Experience **North Carolina State University**
• Mentors: [Dongkuan Xu](#), [Xipeng Shen](#) Aug. 2022 – Present
• Project: Zero-shot Code Generation via Rule-AI Co-learning from Document
• Contribution: Proposed a zero-shot code generation framework combining rule-based and AI-based methods to generate DSL code.
• Publication: ACL in prep

Pennsylvania State University
• Mentor: [Wenpeng Yin](#) June. 2022 - Oct. 2022
• Project: Robustness of learning from task instructions
• Contribution: Experimented and analyzed the robustness of the instruction-tuned model on perturbed instructions.
• Publication: EACL submitted

Dartmouth College

- Mentor: [Soroush Vosoughi](#) May. 2022 - Sep. 2022
- Project: Analysis of artificial intelligence techniques used in biomedical publications
- Contribution: Proposed a method to analyze artificial intelligence techniques used in biomedical publications.
- Publication: JMIR submitted

University of Southern California

- Mentor: [Pedro Szekely](#) Jan. 2022 - May. 2022
- Project: Integrating factual information from language models into knowledge graph embeddings
- Contribution: Improved link prediction task by factual information mined from language models via prompts.

University of Southern California

- Mentor: [Massoud Pedram](#) Aug. 2021 - Dec. 2021
- Project: Reduced-Memory-Access Inference of Deep Neural Networks
- Contribution: Integrated PyTorch distributed data-parallel framework into the flow to support multi-GPU processing.

ETH Zürich

- Mentor: [Yuyi Wang](#) June. 2020 - Oct. 2020
- Project: Designing pre-training tasks for text summarization
- Contribution: Using trained metrics to find the highest importance sentences as summaries makes the pre-training task more effective.

Industry Experience**Lime**

- SDE internship May. 2022 - Aug. 2022
- Reengineered a system for extracting and computing features to make it easier to modify feature definitions and compute features more efficiently.

Umer Technology

- NLP internship Apr. 2021 - Aug. 2021
- Deployed a medical named entity identification system via BERT+CRF.

Transwarp

- NLP internship Jan. 2021 - Apr. 2021
- Established an NLP system to summarize the text through Tensorflow in the environment built by Nvidia Docker.

Professional service**Program Committee**

- ACM International Conference on Web Search and Data Mining(WSDM) 2023

Teaching Experience**Teaching assistant, University of Southern California**

- EE 503: Probability for Electrical and Computer Engineers Fall 2022
- Grading course work and answering questions for students.

Awards	Bachelor of Engineering (B.E.) <ul style="list-style-type: none"> • Masters Students Honors Program (USC) 	2021
	Bachelor of Engineering (B.E.) <ul style="list-style-type: none"> • ZTE Algorithm Competition, Regional Winner Award • Third Class Scholarship (Xidian University) 	2020 2019
Skills	Programming Python, C++, C, R, Java, SQL, JavaScript, HTML, MATLAB Framework PyTorch, Tensorflow, OpenCV, NumPy, Scikit-Learn, SciPy Professional Softwares Git, LaTeX, SPSS, Mathematica, AWS, GCP, Docker, MongoDB	
References	FILIP ILIEVSKI, Assistant Professor Viterbi School of Engineering University of Southern California ilievski@isi.edu Soroush Vosoughi, Assistant Professor Department of Computer Science Dartmouth College soroush.vosoughi@dartmouth.edu Wenpeng Yin, Assistant Professor Department of Computer Science Pennsylvania State University wenpeng.yin@temple.edu Dongkuan Xu, Assistant Professor Department of Computer Science North Carolina State University dxu27@ncsu.edu Xipeng Shen, Professor Department of Computer Science North Carolina State University xshen5@ncsu.edu	