

Jiasheng Gu

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Research interests I have a broad interest 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: 3.6

Research experience **North Carolina State University**
• Mentors: Dongkuan Xu, Xipeng shen Aug. 2022 – Present
• Thesis: 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 from document knowledge.

The Pennsylvania State University
• Mentor: Wenpeng Yin May. 2022 - Jul. 2022
• Thesis: Robustness of learning from task instructions
• Contribution: Experimented and analyzed the robustness of the instruction-tuned model on disturbed instructions.

University of Southern California
• Mentor: Massoud Pedram Aug. 2021 - Dec. 2021
• Thesis: Training Deep Neural Networks for Reduced-Memory-Access Inference
• Contribution: Integrated PyTorch distributed data-parallel framework into the flow to support multi-GPU processing.

University of Southern California
• Mentor: Pedro Szekely Jan. 2022 - May. 2022
• Thesis: Integrating factual information from language models into knowledge graph embeddings
• Contribution: Improved link prediction task by factual information mined from language models via prompts.

	ETH Zürich <ul style="list-style-type: none"> • Mentor: Yuyi Wang June. 2020 - Oct. 2020 • Thesis: Construct pre-training data for text summarization based on trained metrics • Contribution: Use the trained metrics to replace ROUGE to construct the pre-training data needed for PEGASUS.
Publications	<p>Few-shot Code Generation via Rule-AI Co-learning from Document Jiasheng Gu, Zifan Nan, Dongkuan Xu, Xipeng shen <i>In prep, ACL</i></p> <p>Robustness of learning from task instructions Jiasheng Gu, Hanzi Xu, Liangyu Nie, Wenpeng Yin <i>Submitted, EACL</i></p> <p>Artificial Intelligence Related Techniques Used in Recent Bio-medical Publications Jiasheng Gu, Lili Wang, Soroush Vosoughi <i>Submitted, Journal of Medical Internet Research (JMIR)</i></p>
Industry experience	<p>Lime Los Angeles, CA SDE internship Summer 2022 Reengineered a system for extracting and computing features, making it easier to modify feature definitions, compute features more efficiently, and add more tests.</p> <p>Transwarp Shanghai NLP internship Spring 2021 Established an NLP system to summarize the text through Tensorflow in the environment built by Nvidia Docker.</p>
Professional service	<ul style="list-style-type: none"> • ACM International Conference on Web Search and Data Mining 2023
Teaching experience	<p>Teaching assistant, University of Southern California Fall 2022 EE 503: Probability for Electrical and Computer Engineers Grading coursework and exams, leading and supervising lab exercises, and attending regular meetings.</p>
Honors and scholarships	<ul style="list-style-type: none"> • Masters Students Honors Program (University of Southern California) 2021 • Third Class Scholarship (Xidian University) 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