

Tianyang Liu

 University of California, San Diego, La Jolla, CA, USA  (858) 531-7715  til040@ucsd.edu
 Personal Profile  GitHub  LinkedIn  Google Scholar  /  Twitter/X

EDUCATION




University of California, San Diego <i>Ph.D. in Computer Science</i> Mentor: Julian McAuley	San Diego, CA, USA 2024–Present
University of California, San Diego <i>M.Sc. in Computer Science</i> Mentors: Zhiting Hu, Julian McAuley	San Diego, CA, USA 2022–2024 GPA: 4.00/4.00
Wuhan University <i>B.Eng. in Software Engineering</i> Mentors: Peng Liang, Chong Wang	Wuhan, Hubei, China 2018–2022 GPA: 3.85/4.00

WORK EXPERIENCE

Nvidia <i>Summer Intern</i> Mentor: Gaoyan Xie	Santa Clara, CA, USA April 2024–Present
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RESEARCH INTERESTS

My research spans **AI, ML, and NLP**, with a primary focus on advancing **Large Language Models (LLMs)**. I am dedicated to exploring their full potential, enhancing their reasoning capabilities, and fostering their application across various sectors. Key areas include:

-  **Understanding LLM Capabilities and Boundaries:** Conducting in-depth analysis of LLMs to evaluate their strengths, limitations, and ethical considerations, ensuring their effectiveness and responsible use in various contexts.
-  **Augmenting LLMs with Symbolic and World-Aware Reasoning:** Integrating symbolic reasoning with LLMs, and enhancing their ability to interact with and interpret multimodal data, aiming to create more comprehensive and world-aware models.
-  **Developing Versatile LLM-Based Applications:** Utilizing LLMs to create innovative, intelligent solutions that address diverse challenges and enhance accessibility, benefiting a wide range of users and scenarios.

PUBLICATIONS (* EQUAL CONTRIBUTION)

LLM Reasoners: New Evaluation, Library, and Analysis of Step-by-Step Reasoning with Large Language Models

Shibo Hao*, Yi Gu*, Haotian Luo*, Tianyang Liu, Xiyan Shao, Xinyuan Wang, Shuhua Xie, Haodi Ma, Adithya Samavedhi, Qiyue Gao, Zhen Wang, Zhiting Hu
ICLR 2024 Workshop on LLM Agents [[OpenReview](#)]

StarCoder 2 and The Stack v2: The Next Generation

Anton Lozhkov, Raymond Li, Loubna Ben Allal, Federico Cassano, Joel Lamy-Poirier, Nouamane Tazi, Ao Tang, Dmytro Pykhtar, Jiawei Liu, Yuxiang Wei, Tianyang Liu, Max Tian, and 54 more authors
Preprint 2024 [[arXiv](#)]

Rethinking Tabular Data Understanding with Large Language Models

Tianyang Liu, Fei Wang, Muhao Chen
NAACL 2024 [[arXiv](#)] [[code](#)]

RepoBench: Benchmarking Repository-Level Code Auto-Completion Systems

Tianyang Liu, Canwen Xu, Julian McAuley

ICLR 2024 [[arXiv](#)] [[code](#)] [[OpenReview](#)]

ToolkenGPT: Augmenting Frozen Language Models with Massive Tools via Tool Embeddings

Shibo Hao, Tianyang Liu, Zhen Wang, Zhiting Hu

NeurIPS 2023 (Oral) [[arXiv](#)] [[code](#)]

Best Paper Award at SoCal NLP 2023

Architecture Decisions in AI-based Systems Development: An Empirical Study

Beiqi Zhang, Tianyang Liu, Peng Liang, Chong Wang, Mojtaba Shahin, Jiaxin Yu

SANER 2023

RoseMatcher: Identifying the Impact of User Reviews on App Updates

Tianyang Liu, Chong Wang, Kun Huang, Peng Liang, Beiqi Zhang, Maya Daneva, Marten van Sinderen

Information and Software Technology 2023

The Role of User Reviews in App Updates: A Preliminary Investigation on App Release Notes

Chong Wang*, Tianyang Liu*, Peng Liang, Maya Daneva, Marten van Sinderen



APSEC 2022


PROFESSIONAL SERVICES

Invited Reviewer	NLPCC 2023
	ACL ARR (Dec 2023, Feb 2024)
	ICLR 2024
	ICML 2024
	COLM 2024

TECHNICAL SKILLS

 **Programming Languages:** Python, JavaScript, HTML, SQL, \LaTeX , Git, VSCode

 **Machine Learning & Deep Learning Libraries:** Pytorch,  Huggingface Transformers, DeepSpeed

 **Languages:** Chinese (native), English (fluent)