

EDUCATION

Carnegie Mellon University

PhD Student @ Language Technologies Institute (LTI)
Advised by Prof. Sean Welleck

Pennsylvania, US

Aug 2026 - Present

Shanghai Jiao Tong University

Bachelor of Engineering in Software Engineering

Shanghai, China

Aug 2022 - June 2026

SELECTED PAPERS

1. Anjiang Wei, **Tianran Sun**, Tarun Suresh, Haoze Wu, Ke Wang, Alex Aiken. *Quokka: Accelerating Program Verification with LLMs via Invariant Synthesis*, **COLM**, **Oral Presentation at the VerifAI Workshop @ICLR**, 2026. [PDF]
2. Yixiong Fang*, **Tianran Sun***, Yuling Shi, Min Wang, Xiaodong Gu. *LastingBench: Defend Benchmarks Against Knowledge Leakage*, **EMNLP Findings**, 2025. [PDF]
3. Anjiang Wei, **Tianran Sun**, Yogesh Seenichamy, Hang Song, Anne Ouyang, Azalia Mirhoseini, Ke Wang, Alex Aiken. *Astra: A Multi-Agent System for GPU Kernel Performance Optimization*, **DL4C@NeurIPS**, 2025. [PDF]
4. Dylan Zhang, Justin Wang, **Tianran Sun**. *Building A Proof-Oriented Programmer That Is 64% Better Than GPT-4o Under Data Scarcity*, **ACL Findings**, 2025. [PDF]
5. Yixiong Fang*, **Tianran Sun***, Yuling Shi, Xiaodong Gu. *AttentionRAG: Attention-Guided Context Pruning in Retrieval-Augmented Generation*, **KnowFM@ACL**, 2025. [PDF]
6. Saman Dehghan*, **Tianran Sun***, Tianxiang Wu, Zihan Li, Reyhaneh Jabbarvand. *Translating Large-Scale C Repositories to Idiomatic Rust*, **In Submission**, 2025. [PDF]

*Equal Contribution

RESEARCH EXPERIENCE

Visiting Research Intern @ Intelligent Cat Lab

Advisor: Reyhaneh Jabbarvand (UIUC)

Research: Scalable and reliable C-to-Rust repository translation with LLMs and program analysis [6].

UIUC

July 2024 - Jan 2026

Visiting Research Intern

Advisor: Alex Aiken (Stanford)

Research: Multi-agent optimization for correct and high-performance CUDA kernel generation [3] and LLM-based invariant synthesis and verifier-guided evaluation [1].

Stanford

June 2025 - Mar 2026

Research Assistant

Advisor: Xiaodong Gu (SJTU)

Research: Attention-guided prompt compression [5] and benchmark decontamination and knowledge-leakage mitigation through counterfactual rewriting [2].

SJTU

Sep 2024 - May 2026

Visiting Research Intern

Advisor: Xinyu Wang (University of Michigan)

Research: Neurosymbolic web-automation program synthesis with LLMs.

UMich, Ann Arbor

June 2025 - Jan 2026

SCHOLARSHIPS AND AWARDS

- **Outstanding Graduate of Shanghai**
Award for top undergraduate graduates in Shanghai.

2025

- Web Co-Chair

ReCode@ICSE2026