

Songcheng Cai

🌐 [Personal Website](#) | ✉ s56cai@uwaterloo.ca | in [LinkedIn](#)

EDUCATION

Zhejiang University (ZJU)

B.Eng. in Information Engineering

Hangzhou, China

September 2020 - Jun 2024

- **GPA: 3.87 / 4.00, Major GPA: 3.99 / 4.00**

University of Waterloo

MMath in Computer Science | Advisor: Krzysztof Czarnecki

Waterloo, Canada

September 2024 - Present

- **GPA: 90.75 / 100**
- **Fully Funded (International Master's Award of Excellence, RA, and TA Support)**
- **Research Area: LLM Agents, Vision-Language-Action Models for Autonomous Driving**

RESEARCH EXPERIENCE

WISE Lab, University of Waterloo

Research Assistant; Advisor: Krzysztof Czarnecki

Waterloo, Canada

September 2025 – Present

- Research focused on vision-language-action models for autonomous driving, with an emphasis on multimodal reasoning and decision-making in complex driving environments.
- Developing LiDAR-grounded driving agents that combine 3D perception, multimodal understanding, and language-conditioned decision making for robust autonomous driving.

TIGER Lab, University of Waterloo

Research Intern; Advisor: Wenhui Chen

Waterloo, Canada

July 2025 – Present

- Research focused on LLM agents, agentic post-training, and self-evolving learning algorithms that leverage rich automatic feedback for scalable supervision.
- Contributed to research on software engineering agents, visualization coding agents, and reward-driven agent optimization, resulting in publications including SWE-QA-Pro and VisCoder2.

Speech and Language Lab at TTIC

Research Intern; Advisor: Honyuan Mei and Karen Livescu

Chicago, IL

July 2023 – December 2023

- Conducted comprehensive research to identify and demonstrate inherent biases in LLMs, including LLaMA 2, highlighting the capability of these models to self-correct biases through targeted prompting.
- Successfully utilized a Chain-of-Thought few-shot prompting technique, demonstrating its effectiveness in mitigating gender biases within LLMs.

PUBLICATIONS

1. [Revisiting Automated Evaluation for Long-form Table Question Answering](#)

Yuqi Wang, Lyuhao Chen, **Songcheng Cai**, Zhijian Xu, Yilun Zhao
EMNLP 2024.

2. [VisCoder2: Building Multi-Language Visualization Coding Agents](#)

Yuansheng Ni*, **Songcheng Cai***, Xiangchao Chen*, Jiarong Liang, Zhiheng Lyu, Jiaqi Deng, Kai Zou, Ping Nie, Fei Yuan, Xiang Yue, Wenhui Chen
ICLR 2026.

3. [SWE-QA-Pro: A Representative Benchmark and Scalable Training Recipe for Repository-Level Code Understanding](#)

Songcheng Cai*, Zhiheng Lyu*, Yuansheng Ni, Xiangchao Chen, Baichuan Zhou, Shenzhe Zhu, Yi Lu, Haozhe Wang, Chi Ruan, Benjamin Schneider, Weixu Zhang, Xiang Li, Andy Zheng, Yuyu Zhang, Ping Nie, Wenhui Chen
ACL 2026 Findings.

4. [ClawBench: Can AI Agents Complete Everyday Online Tasks?](#)

Yuxuan Zhang, Yubo Wang, Yipeng Zhu, Penghui Du, Junwen Miao, Xuan Lu, Wendong Xu, Yunzhuo Hao, **Songcheng Cai**, Xiaochen Wang, Huaisong Zhang, Xian Wu, Yi Lu, Minyi Lei, Kai Zou, Huifeng Yin, Ping Nie, Liang Chen, Dongfu Jiang, Wenhui Chen, Kelsey R. Allen
Preprint / Under Review.

5. **RewardHarness: Self-Evolving Agentic Post-Training**

Yuxuan Zhang*, Penghui Du*, Bo Li*, Cong Wei*, Junwen Miao, Huaisong Zhang, **Songcheng Cai**, Yubo Wang, Dongfu Jiang, Yuyu Zhang, Ping Nie, Wenhui Chen, Changqian Yu, Kelsey R. Allen
Preprint / Under Review.

TEACHING & ACADEMIC SERVICE

- **Teaching Assistant Head, CS480/680: Introduction to Machine Learning** (Spring 2025). Designed and graded midterm examination questions; supported students through Piazza and office hours.
- **Teaching Assistant: CS230 Introduction to Computers and Computer Systems** (Winter 2025, Winter 2026, Spring 2026); **CS135 Designing Functional Programs** (Fall 2024, Fall 2025).
- **Conference Reviewer:** ICLR 2026; AISTATS 2025 (**Best Reviewer**), 2026.

HONORS & AWARDS

3 rd Prize in Zhejiang University Physics (Theory) Innovation Competition (Top 30%)	<i>May 2022</i>
Second-Class Scholarship (Top 10%)	<i>September 2021 and 2023</i>
Provincial Government Scholarship (Top 5%)	<i>September 2023</i>
International Master’s Award of Excellence	<i>September 2024</i>

SKILLS

Language Proficiency:	Chinese (Native), English (Proficient, TOEFL: 103)
Programming Languages:	C++, C, Python, MatLab
Interests:	Hard-pen calligraphy, Gym, NBA