

Chentian Wu

Math & CS @ UW-Madison

<https://wuct.site>

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Research Interests

Mathematical Logic, Formal Methods, Program Synthesis and Verification.

Education

University of Wisconsin-Madison , Madison, USA	01/2024 - 12/2025
B.Sc in Mathematics with honors (GPA: 4.0/4.0)	(expected)
B.Sc in Computer Science with honors (GPA: 4.0/4.0)	
Nanjing University , Nanjing, China	09/2021 - 12/2023
B.Eng in Computer Software Engineering	(transferred)

Research Experiences

Directed Reading Program	UW-Madison
Advised by <i>Yiqing Wang</i>	09/2024 - Now
Model Theory and Abstract Elementary Classes	
PurPL	Purdue University
Advised by Prof. <i>Xiaokang Qiu</i>	03/2024 - Now
Program Synthesis & Computer Logic	
iSE Lab	Nanjing University
Advised by Prof. <i>Chunrong Fang</i>	10/2022 - 09/2023
Mobile GUI Testing & Large Language Models	

Publications

LLM for Test Script Generation and Migration: Challenges, Capabilities, and Opportunities [arxiv]

Shengcheng Yu, Chunrong Fang, Yuchen Ling, **Chentian Wu**, Zhenyu Chen.

In proceedings of IEEE QRS 2023.

Awards

Dean's List.	UW-Madison , 05/2024
For students with higher level of scholastic achievements in 2024 Spring.	
Summer Internship Scholarship.	UW-Madison , 05/2024
For students with summer internships.	
Transfer Scholars Summer Award.	UW-Madison , 05/2024
For transfer students maintaining satisfactory academic progress.	
CitiCup Financial Innovation and Application Competition, Third Prize	China , 08/2023
Top 10%.	
National College Students' Mathematical Competition, First Prize	Jiangsu, China , 11/2022
Top 5%.	
Nanjing University Renmin Scholarship.	Nanjing University , 10/2022
Top 10%.	

Teaching

CS Learning Center Tutor. [intro]	UW-Madison , 09/2024 - Now
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Helping students with CS 200, 300, 400 level courses in UW-Madison.

Math Learning Center Proof Table Tutor. [\[intro\]](#)

UW-Madison, 09/2024 - Now

Providing support in successfully navigating proof-based (MATH341+) mathematics course.

Projects

- FO^k SYNTH:** Synthesizing Extended First-Order Logic Sentences with Alternating Tree Automata. [\[code\]](#) 06/2024
A possible implementation of the **EXACT LEARNING** synthesizer in [this paper](#). (Independent)
Project Leader
- REP FLOW:** Dialogue System based Android Bug reproduction workflow. [\[code\]](#) 12/2023
A possible implementation of REPASSISTOR in [this paper](#).
Project Leader
- SYSY COMPILER:** Building a Compiler for **SysY** (a sub-language of C) from Scratch. [\[code\]](#) 06/2023
Using ANTLR4 as frontend and LLVM as backend.
Independent
- SSE STAR MARKET MAKER:** Market Making Strategy Management Platform. 12/2022
Enhancing Market Resilience and Liquidity with Deep Learning-Based Strategies.
Web Development Group Leader
- SEEC PLAG:** Serverless-based Integrated Online Plagiarism Checker. 10/2022
National Training Program of Innovation for Undergraduates (202310284364Y)
Project Participant
- VJVM:** Using Java to Implement a Java Virtual Machine from Scratch. [\[code\]](#) 05/2022
Derived from Final Project of SECI@NJUSE, 2022.
Independent

Skills

Programming

Languages: Python, Java, C, C++, OCaml, \LaTeX , SQL

Frameworks: ANTLR4, PyTorch, SpringBoot, Flask, Vue, React, Appium, Docker, Kubernetes, LangChain.

Languages: English (Fluent), Mandarin (Native)

One More Thing: An amateur enthusiast of *Number Theory* and *Combinatorics*.