

Yuhan Chi

School of Mathematical Sciences, Fudan University
chi-shan0707.github.io github.com/Chi-Shan0707 Shanghai, China

Education

Fudan University

B.S. in Information and Computing Science & Artificial Intelligence (Double Degree)
School of Mathematical Sciences

Shanghai, China
Sep. 2025 – Present

- GPA: 3.96/4.00 (most recent semester); Rank: 10th (top 5%) in cohort

Research Interests

- **Mathematical Foundations of Intelligence** — grounding AI trust in formal, mathematical terms rather than empirical benchmarks
- **Entrustable Sequential Decision-Making** — building agents that are mathematically verifiable and know when to act, defer, or bear consequences
- **Reinforcement Learning & World Models** — RL as a language for trust, uncertainty, and structured interaction with the environment

Selected Open-Source Projects

Cot-Knot

2026

Preprint: zenodo.org/records/19690518

github.com/Chi-Shan0707/Cot-Knot

- Paper-level research repository on the domain-conditioned semantics of self-correction in chain-of-thought (CoT)
- Investigated whether “self-correction” acts as a universal quality signal or is domain-conditioned across Math and Coding tasks
- Shifted focus from standard verifier benchmarking to structural measurement analysis of annotation protocols grounding self-correction probes
- Proposed a replacement protocol for coding knots based on execution-semantic breaks to improve conceptual precision and annotator agreement
- Currently preparing a workshop submission

TinyLoRA-GRPO-Coder

2026

github.com/Chi-Shan0707/TinyLoRA-GRPO-Coder

- Independent reimplement and adaptation of TinyLoRA + GRPO from *Learning to Reason in 13 Parameters*
- Migrated the method from math reasoning to verifiable competitive-programming code generation on Qwen2.5-Coder-3B
- Trained with a minimal number of shared trainable parameters; replaced static heuristics with real compile-and-run rewards
- Built the full pipeline end-to-end: data processing, training, multi-GPU setup, reward design, evaluation, and validation

microgpt.cpp

2026

github.com/Chi-Shan0707/microgpt.cpp

- Minimal GPT implementation from first principles in C++, motivated by understanding model internals without relying on high-level frameworks

Skills

- **Programming:** Python, C++, C, Java, Node.js, Lean 4
- **ML / AI:** PyTorch, deep learning, LLM fine-tuning, reinforcement learning, computer vision
- **Tools:** Git, GitHub, Linux, L^AT_EX, Markdown, VS Code
- **Other:** Mathematical proof writing, technical writing, self-directed learning, competitive programming

Additional Information

- All listed projects were completed independently outside a formal lab or research group, using AI only as an auxiliary tool where appropriate
- Actively self-studying mathematics, algorithms, and AI beyond formal coursework; maintains an active public

GitHub profile documenting ongoing work

- Maintains *github-unflag-playbook-cn*, a Chinese playbook documenting GitHub account flagging, recovery cases, and appeal workflows.
github.com/Chi-Shan0707/github-unflag-playbook-cn
- Contributor to *FDUGuideBook/nav-site*, a navigation resource for the Fudan community.
github.com/FDUGuideBook/nav-site
- Personal website: chi-shan0707.github.io