

Yuyao Wang

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[GitHub](#) \diamond [Homepage](#)

RESEARCH INTERESTS

I am generally interested in topics related to the *correctness*, *programmability* and *performance* of computer systems. I have been attached to programming and algorithm design since middle school and aspire to bring elegant solutions for tackling with *real-world* problems.

EDUCATION

Nanjing University

B.S. in Computer Science (Elite Class); GPA: 4.75/5.00 (1/20)

Nanjing, China

2020 - Present

PUBLICATION

[1] NEURI: Diversifying DNN Generation via Inductive Rule Inference.

Jiawei Liu, Jinjun Peng, Yuyao Wang, Lingming Zhang. (Under Review)

[pre-print](#)

RESEARCH EXPERIENCE

• PL/FM/SE Group, UIUC

Sept. 2022 - Present

Advised by [Jiawei Liu](#) and [Prof. Lingming Zhang](#)

Topic: *Program Synthesis for Testing*

Leveraged program synthesis for generating well-formed deep-learning models in order to validate DL toolchain [1].

Role in the project: *independently* designed rule synthesizer (**32,000** \times speed-up over general-purpose program synthesis tool *Rosette*) and record augmentation strategies, with **87** new bugs found for PyTorch and TensorFlow.

SELECTED AWARDS

- **Gold Medal**, International Collegiate Programming Contest (ICPC) Asia Regional Contest (Xi'an) Dec. 2022
- **Gold Medal**, International Collegiate Programming Contest (ICPC) Asia Regional Contest (Shanghai) Dec. 2021
- Special Scholarship for Undergraduates in Basic Science (**1/20**), Nanjing University Oct. 2022
- China National Scholarship (**top 0.2%**) Sep. 2021
- **Silver Medal**, National Olympiad in Informatics (NOI)¹ Jul. 2018

SKILL SET

My skill set mainly covers efficient algorithm design. Nonetheless, I am a fast learner of new tools.

- **Language:** C++, Python, \LaTeX
- **Machine Learning:** TensorFlow, PyTorch

¹Won during middle school.