Yuyao Wang

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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 *real-world* problems.

EDUCATION

Nanjing University   Nanjing, China
B.S. in Computer Science (Elite Class); GPA: 4.75/5.00 (Ranking: 1/20)   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 [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×** 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

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[1] Won during high school.