



JIANGNAN HUANG

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PROFILE

Ph.D. candidate in **AI4SE** at Radboud University (RU), developing smarter DevOps practices through research on GitHub Actions and LLM-powered CI/CD workflow generation. Brings international research experience, strong communication skills, and a dependable team-oriented approach, with hands-on involvement in research events and academic support.

EDUCATION

Ph.D. in Software Science iCIS, Radboud University Advisor: Dr. Bin Lin and Prof. Dr. Frits Vaandrager	Oct. 2022 – Present Nijmegen, The Netherlands
The 17th International Summer School on Software Engineering (ISSSE 2024) University of Salerno	Summer, 2024 Salerno, Italy
MSc in Artificial Intelligence Université Paris-Saclay Thesis advisor: Prof. Dr. Isabelle Guyon	Sept. 2019 – Aug. 2021 Orsay, France
BEng in Opto-electronic Information Science and Engineering Huazhong University of Science and Technology (HUST)	Sept. 2014 – June 2018 Wuhan, China

RESEARCH EXPERIENCE

Doctoral Researcher iCIS, Radboud University	Oct. 2022 – Present Nijmegen, The Netherlands
• Studying automation, reliability, and security of CI/CD workflows • Developing Learning-based frameworks for workflow completion and test generation • Collaborating with international research partners across Europe and Asia	
Visiting Researcher Hangzhou Dianzi University (HDU)	June 2025 – Aug. 2025 Hangzhou, China
• Advanced automated support for workflow design and maintenance • Developed LLM-based methods for human-like test generation	
Visiting Researcher SDlab, NARA Institute of Science and Technology (NAIST)	Nov. 2024 – Jan. 2025 Nara, Japan
• Conducted empirical studies on CI/CD workflow reliability • Designed FLOWSTEP, a step-type-aware LLM-based workflow completion model	
Research Engineer Huawei Technologies France	Oct. 2021 – Jan. 2022 Boulogne-Billancourt, France
• Designed a reinforcement-learning-based system for virtual machine scheduling	
Research Intern Inria Saclay Center	Mars 2021 – Aug. 2021 Palaiseau, France
• Analyzed privacy–utility trade-offs in ML models • Designed and implemented an LTU attacker for membership inference attacks	

PUBLICATIONS

- 1 J. Huang and B. Lin, "Revisiting security practices for github actions workflows," in *2025 IEEE/ACM 33rd International Conference on Program Comprehension (ICPC)*, 2025, pp. 73–77. DOI: [10.1109/ICPC66645.2025.00016](https://doi.org/10.1109/ICPC66645.2025.00016).
- 2 L. Zheng, S. Li, X. Huang, J. Huang, B. Lin, J. Chen, and J. Xuan, "Why do github actions workflows fail? an empirical study," *ACM Trans. Softw. Eng. Methodol.*, Jul. 2025, Just Accepted, ISSN: 1049-331X. DOI: [10.1145/3749371](https://doi.org/10.1145/3749371).
- 3 J. Huang and B. Lin, "Cigar: Contrastive learning for github action recommendation," in *2023 IEEE 23rd International Working Conference on Source Code Analysis and Manipulation (SCAM)*, [Best Paper Award], 2023, pp. 61–71. DOI: [10.1109/SCAM59687.2023.00017](https://doi.org/10.1109/SCAM59687.2023.00017).
- 4 J. Pedersen, R. Muñoz-Gómez, J. Huang, H. Sun, W.-W. Tu, and I. Guyon, "Ltu attacker for membership inference," *Algorithms*, vol. 15, p. 254, Jul. 2022. DOI: [10.3390/a15070254](https://doi.org/10.3390/a15070254).
- 5 J. Huang, Z. Chen, and N. Dupin, "Comparing local search initialization for k-means and k-medoids clustering in a planar pareto front, a computational study," in *Optimization and Learning*, B. Dorronsoro, L. Amodeo, M. Pavone, and P. Ruiz, Eds., Cham: Springer International Publishing, 2021, pp. 14–28, ISBN: 978-3-030-85672-4.

TEACHING & MENTORING

Mentored undergraduates: Junyi YANG	HDU, Since 2025
TA for Requirements Engineering and Design, Instructors: Mairieli Wessel, Hanna Schraffenberger	RU, Spring 2025
TA for Software Verification, Instructors: Frits Vaandrager, Bin Lin	RU, Spring 2024/2025
TA for Software Engineering, Instructors: Bin Lin, Cynthia Kop	RU, Spring 2023/2024

SKILLS

Languages: English (Proficient), Chinese (Native), French (B2), Japanese (B1)

Technical:

- **Programming:** Python, Java, C++
- **ML/AI:** PyTorch, Hugging Face, Transformers, LLM techniques
- **DevOps:** GitHub Actions, Docker
- **Databases:** MySQL, PostgreSQL, Redis, MongoDB, Neo4j
- **Tools:** LaTeX, Git, Linux

EXTRACURRICULAR & INTEREST

Sports: Avid outdoor sports enthusiast: bouldering, snowboarding, swimming, tennis, and more.

- Former vice-president of the HUST Roller-Skating Club (2015–2016), leading a team of 10+ members and organizing multiple training sessions and campus events.

Photography: Active street photographer since 2019, with a focus on urban life, travel, and candid portrait work.