

Education & Experience

Singapore Management University • School of Computing and Information Systems Singapore
Research Engineer 2021.06-Present

- › Research work on Software Engineering supervised by [Prof. David Lo](#)
- › Advance projects about code completion, bug localization, language models of code and AI model testing.
- › Publish (or to appear) 7 papers in remarkable Software Engineering conferences.

Chinese Academy of Sciences • Institute of Computing Technology Beijing, China
NLP Research Assistant Intern 2020.07-2021.04

- › Research work on text generation supervised by [Dr. Shi Wang](#)
- › Advance a project that combines logic forms and tabular data to generate readable text.

Yangzhou University • School of Information Engineering Yangzhou, China
B.Eng., Electronic and Information Engineering 2016.09-2020.06

- › Average Score 83/100, Top 10%.
- › Research work on Multi-agent Systems, published 6 papers supervised by [Prof. Junwu Zhu](#).
- › Honored as Outstanding Graduate for excellent academic achievements.

Fudan University • Cooperative Information and Systems Lab Shanghai, China
CSCW & Social Computing Summer School 2019.08

Publications

Conference:

- [1] Jieke Shi, Zhou Yang, Junda He, Bowen Xu and David Lo. “**Can Identifier Splitting Improve Open-Vocabulary Language Model of Code?**” 2022 IEEE 29th International Conference on Software Analysis, Evolution and Reengineering (SANER). (5 pages, ERA Track.) [[PDF](#)][[Code](#)]
- [2] Zhou Yang, Jieke Shi, Muhammad Hilmi Asyrofi and David Lo. “**Revisiting Neuron Coverage Metrics and Quality of Deep Neural Networks.**” 2022 IEEE 29th International Conference on Software Analysis, Evolution and Reengineering (SANER). (12 pages, RENE Track.) [[PDF](#)][[Code](#)]
- [3] Ratnadira Widyasari, Stefanus Agus Haryono, Ferdian Thung, Jieke Shi, Constance Tan, Fiona Wee, Jack Phan, and David Lo. “**On the Influence of Biases in Bug Localization: Evaluation and Benchmark.**” 2022 IEEE 29th International Conference on Software Analysis, Evolution and Reengineering (SANER). (12 pages, RENE Track.) [[PDF](#)][[Code](#)][[Dataset](#)]
- [4] Zhou Yang, Jieke Shi, Junda He and David Lo. “**Natural Attack for Pre-trained Models of Code.**” 2022 IEEE/ACM 44th International Conference on Software Engineering (ICSE). (12 pages, Technical Track.) [[PDF](#)][[Code](#)]
- [5] Zhou Yang, Harshit Jain, Jieke Shi, Muhammad Hilmi Asyrofi and David Lo. “**BiasHeal: On-the-Fly Black-Box Healing of Bias in Sentiment Analysis Systems.**” 2021 IEEE 37th International Conference on Software Maintenance and Evolution (ICSME). (5 pages, NIER Track.) [[PDF](#)][[DOI](#)][[Code](#)]
- [6] Muhammad Hilmi Asyrofi, Zhou Yang, Jieke Shi, Chu Wei Quan and David Lo. “**Can Differential Testing Improve Automatic Speech Recognition Systems?**” 2021 IEEE 37th International Conference on Software Maintenance and Evolution (ICSME). (5 pages, NIER Track.) [[PDF](#)][[DOI](#)][[Code](#)]
- [7] Zhou Yang*, Jieke Shi*, Shaowei Wang and David Lo. “**IncBL: Incremental Bug Localization.**” 2021 IEEE/ACM 36th International Conference on Automated Software Engineering (ASE). (4 pages, Tool Demonstrations, *Equal contributions.) [[PDF](#)][[DOI](#)][[Code](#)][[Poster](#)]
- [8] Jieke Shi, Junwu Zhu, Jian Li, Fang Liu, and Yunbo Lv. “**An efficient double auction mechanism for job allocation.**” 2019 IEEE 23rd International Conference on Computer Supported Cooperative Work in Design (CSCWD). (6 pages, Main Track.) [[PDF](#)] [[DOI](#)]
- [9] Jieke Shi, Zhou Yang, and Junwu Zhu. “**An Auction-Based Task Allocation Algorithm in Heterogeneous Multi-Robot System.**” 2020 EAI 2nd International Conference on Robotic Sensor Networks (ROSENET). (8 pages, Main Track.) [[PDF](#)] [[DOI](#)]

Journal:

- [1] Jieke Shi, Zhou Yang, and Junwu Zhu. “An auction-based rescue task allocation approach for heterogeneous multi-robot system.” Multimedia Tools and Applications 79, no. 21 (2020): 14529-14538. [PDF] [DOI]
- [2] Yi Jiang, Jinjin Wang, Jieke Shi, Junwu Zhu, and Ling Teng. “Network-aware virtual machine migration based on gene aggregation genetic algorithm.” Mobile Networks and Applications (2020): 1-12. [PDF] [DOI]
- [3] Junwu Zhu, Jieke Shi, Zhou Yang, and Bin Li. “A real-time decentralized algorithm for task scheduling in multi-agent system with continuous damage.” Applied Soft Computing 83 (2019): 105628. [PDF] [DOI]
- [4] Junwu Zhu, Ling Teng, Huimin Lu, Jieke Shi, and Bin Li. “Ontology negotiation: Knowledge interchange between distributed ontologies through agent negotiation.” Concurrency and Computation: Practice and Experience: e5406. [PDF] [DOI]

Research Projects

Automated Negotiation and Game Mechanism of Multi-agent System in Semantic Web

National Undergraduate Innovation and Entrepreneurship Project

2016.09-2020.06

Project No.201811117029Z, Granted by Jiangsu Education Department, CNY \$10000

- For complex scenarios, i.e., post-disaster rescuing, designed efficient multi-agent system task allocation mechanisms and algorithms to achieve better resource planning effects.
- Achieved good performance in some tasks of RCRSS, published 3 papers during this project.

DMA Partition Leakage Detection Platform Based on NB-IoT

Key Project of ‘Challenge Cup’ Academic Contest in Yangzhou University

2016.09-2020.06

Granted by Yangzhou University, CNY \$10000

- Designed and produced a hardware prototype based MSP430 chips and NB-IoT protocol, and a monitoring platform for pipeline network leakage detection.
- Got the First Prize of the contest in Yangzhou University.

Honors & Awards

Honors and Scholarships:

- 2021.06, Outstanding Undergraduate Dissertation (Awarded to top 2% for all graduates in province), Department of Education of Jiangsu, China
- 2020.06, Outstanding Graduate (Awarded to top 10% for all graduates), Yangzhou University, China
- 2019.11, National Encouragement Scholarship, Ministry of Education of the People’s Republic of China
- 2018.12, The Second Level President’s Scholarship (Awarded to top 5 student in class), Yangzhou University, China
- 2017.12, The First Level President’s Scholarship (Awarded to top 1 student in class), Yangzhou University, China

Contest Awards:

- 2019.07, Third Prize of 14th National University Students’ Intelligent Car Race
Awarded by MOE of China and NXP Semiconductors
- 2018.05, Second Prize of 8th Mathor Cup Challenge Contest in Mathematical Modeling
Awarded by Chinese Society of Optimization, Overall Planning and Economic Mathematics
- 2018.04, Second Prize of 9th Lanqiao Cup Programming Contest
Awarded by Ministry of Industry and Information Technology of China

Professional Activities

Talks:

- Game theory and Personality Traits in Task Scheduling Problem of Swarm Robot System
Invited talk, 9th Students Workshop between Yangzhou University and Kyushu Institute of Technology, Yangzhou, China, 2020.01.
- An Efficient Double Auction Mechanism for Job Allocation
Oral presentation, IEEE CSCWD, Porto, Portugal, 2019.05.
- An Auction-Based Task Allocation Algorithm in Heterogeneous Multi-Robot System
Oral presentation, EAI ROSENET, Kokura, Japan, 2018.08

Reviewer Service:

- › 2021-Present, Robotics and Autonomous Systems Journal
- › 2021-Present, Neurocomputing (Software Section) Journal
- › Sub-reviewer of ICSE 2022, ICECCS 2022 conference.

Teaching:

- › 2019.03-2019.06, Student Mentor of Micro Innovation Contest, Yangzhou University, China

Membership:

- › 2019-Present, Student Member of China Computer Federation (CCF)
- › 2019-Present, Student Member of Association for Computing Machinery (ACM)