

Boyang Yang

 Company	Beijing Judao Youda (Jisuanke)	 Title	Senior Engineer
 Position	Chief Technology Officer	 Email	yby@ieee.org
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Education

- Yanshan University, Computer Technology, PhD** 2022.09–2026.01
Advisor: Shunfu Jin; Dissertation: *Program Repair Methods Based on Generative Large Language Models*
- Beihang University, Computer Technology, MEng** 2015.03–2018.06
Advisor: Zhoujun Li; Thesis: *Online User Identification System Based on Code Editing Operations*
- Beihang University, Computer Science and Technology, BS** 2009.07–2013.06
Advisor: Zhoujun Li; First BUAA team to reach the ICPC World Finals (27th globally); Recommended graduate admission

Publications and Books

First Author

- **Boyang Yang**, Luyao Ren, Xin Yin, Haoye Tian, Shunfu Jin. *Input Reduction Enhanced LLM-based Program Repair.* **ICSE'26 (CCF-A) Research Track**
- **Boyang Yang**, Haoye Tian, Jiadong Ren, ... & Shunfu Jin. *MORRepair: Teaching LLMs to Repair Code via Multi-Objective Fine-Tuning.* **ASE'25 (CCF-A) Journal-First Track**
- **Boyang Yang**, Haoye Tian, Jiadong Ren, ... & Shunfu Jin. *MORRepair: Teaching LLMs to Repair Code via Multi-Objective Fine-Tuning.* **TOSEM'25 (CCF-A, SCI Q1 Top)**
- **Boyang Yang**, Haoye Tian, Wei Pian, Haoran Yu, Haitao Wang, ... & Shunfu Jin. *CREF: An LLM-based Conversational Software Repair Framework for Programming Tutors.* **ISSTA'24 (CCF-A) Research Track**
- **Boyang Yang**, Dengkui Zhang, Jianyuan Wang. *Easy Programming: A Zero-Foundation C++ Primer for K-12 Students.* **Tsinghua University Press**

Co-author

- Wei Luo, Jacky Keung, **Boyang Yang**, et al. *Unlocking LLM Repair Capabilities Through Cross-Language Translation and Multi-Agent Refinement.* **ICSE'26 (CCF-A) Research Track**
- Wei Luo, Jacky Keung, **Boyang Yang**, et al. *When Fine-Tuning LLMs Meets Data Privacy: An Empirical Study of Federated Learning in LLM-Based Program Repair.* **TOSEM'25 (CCF-A, SCI Q1 Top)**
- Haoran Yu, **Boyang Yang**. *Design and Practice of Software Engineering Practical Training.* **Experimental Technology and Management'18 (PKU Core)**
- Fu D, Xu Y, Yu H, Xu Y., **Yang Boyang**. *WASTK: A weighted abstract syntax tree kernel method for source code plagiarism detection.* **Scientific Programming'17(SCI Q4)**

Patents

- Shunfu Jin, **Boyang Yang**, Fengling Liu. *Automated Software Defect Repair Method, Apparatus, Device, and Storage Medium,* under substantive examination. **2025**
- **Boyang Yang**, Haoran Yu, Haitao Wang. *Human-AI Collaborative Program Repair Method Based on Large Language Models,* under substantive examination. **2024**
- Shunfu Jin, **Boyang Yang**, Fengling Liu. *Minimal-Modification Program Repair Method Based on Large Language Models,* granted. **2024**
- **Boyang Yang**, Deqiang Fu, Haoran Yu. *Code Plagiarism Detection Method Based on Weighted Abstract Syntax Trees,* granted. **2022**
- Haoran Yu, **Boyang Yang**, Bin Yang. *Automated Assessment Method and System Based on Directed Acyclic Graphs and Topological Sorting,* granted. **2020**

- Haoran Yu, Boyang Yang, Bin Yang. *Interactive Visualization Method and System for Abstract Concepts Based on a Free-Component Architecture*, granted. 2019

Experience

Beijing Judao Youda Network Technology Co., Ltd., Chief Technology Officer 2015.03–Present

National High Tech Enterprise; Member of China Association for Computer Practice Education; Outstanding Partner of Shanghai Jiao Tong University

- Held successive roles at the company, including Senior R&D Engineer, Director of Teaching R&D, Chief Academic Officer, and Chief Technology Officer.
- Led delivery of core technologies on the Jisuanke platform, including a container-based cloud engineering practice and judging platform, an Online Judge single-file submission system, and an abstract syntax tree-driven code equivalence matcher (ASTEC). These products generated strong commercial results, and ASTEC became the core technical advantage behind primary revenue products.
- Since 2015, founded and organized eight seasons of the JiSuanZhiDao programming contest series, attracting over 200,000 participants. Built partnerships with leading companies such as Baidu, Alibaba, and Tencent. Hosted multiple ICPC Asia online qualifiers, supporting over 6,000 contestants in a single event, and co-hosted large-scale algorithm contests with companies including SenseTime and Pony.ai.
- Since 2017, as a Ministry of Education industry-academia collaborative education supporting enterprise, delivered training platforms, course resources, and teaching support to dozens of universities, including Tsinghua University, Peking University, Wuhan University, Nankai University, Information Engineering University, University of Science and Technology Beijing, and Hefei University of Technology.
- In 2018, built a nationwide informatics curriculum system from scratch and established teaching, curriculum R&D, and tutoring teams. From 2019 to 2021, served as General Manager of the consumer business unit, coordinating operations and driving rapid growth.
- From 2022 to Nov 2025, aligned doctoral research with programming education scenarios and led R&D in AI-assisted programming. Published three papers in ISSTA and TOSEM and filed five related invention patents. Deployed the results to serve hundreds of thousands of learners, improving learning outcomes and reducing labor cost.

Wuhan University, External Lecturer 2021–Present

Course design and instruction for *Security Maker Practice Training*, National Cybersecurity School

- Organized and taught the course for 5 consecutive years, with over 300 students per cohort and a duration of 3 to 4 weeks. The course strengthens engineering practice and algorithm application through project-based work and has received strong evaluations from students and faculty.
- The course won First Prize in the Ministry of Education Cybersecurity Teaching Steering Committee's industry-academia collaborative education case evaluation in 2022, ranking second overall. In 2025, the teaching evaluation score was 93.43, ranking 4th among comparable courses.

Sina, Advertising Algorithm Engineer 2013.07–2015.03

Core developer of the Sina FuYi performance advertising platform; promoted twice during tenure

- Focused on improving online CTR prediction models and serving strategies, including implementing Google FTRL for CTR estimation, optimizing online policies such as frequency control and E&E, correcting position bias for text-link inventory, and building a real-time CTR model based on streaming data.

Professional Service and Awards

Professional Service

- Senior Member of China Computer Federation; CCF YOCSEF National Committee Member; Member of the CCF CTO Club
- Program Committee member for international software engineering conferences, including ICSME, SANER, ICST, and MSR
- Reviewer for software engineering journals, including EMSE and ASE
- Reviewer for AI conferences, including NeurIPS and ACL

- External lecturer at Wuhan University, Information Engineering University, RDFZ Chaoyang School, Chongqing Yucai Secondary School, and Suqian Secondary School
- Instructor, Beijing Informatics Training Team Winter Camp (2012)

Honors and Awards

- First Prize, Ministry of Education Cybersecurity Teaching Steering Committee, industry-academia collaborative education case evaluation (2022)
- Global Rank 451, Google Code Jam (2020)
- ACM-ICPC Asia Regional Gold Medalist (2012); ACM-ICPC World Finals 27th Place (2013)
- First Prize, Lanqiao Cup National Software and IT Talent Competition (2012)
- Huawei Scholarship, Beihang University (2012); Outstanding Graduate, School of Computer Science, Beihang University (2013)