Dowon Song

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Research Areas

My research focuses on automated software debugging by leveraging program analysis and program synthesis.

Professional Experience

Postdoctoral Researcher, **Korea University** 2026.04 – Present

Educational Background

Integrated M.S./Ph.D. in Computer Science, **Korea University** 2018.03 – 2026.02

B.S. in Computer Science, **Korea University** 2014.03 – 2018.02

Awards

1. Outstanding Paper Award, Graduate School, Korea University, Aug 2021
2. Second Prize, Undergraduate Research Competition, Department of Computer Science, Korea University, May 2017

Publications

Publications in top-tier conferences in programming languages and software engineering (OOPSLA 2025, FSE 2021, OOPSLA 2019, and OOPSLA 2018).

1. **Dowon Song** and Hakjoo Oh. *Enhancing APR with PRISM: A Semantic-Based Approach to Overfitting Patch Detection.* **OOPSLA 2025**: ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications

2. **Dowon Song**, Woosuk Lee, and Hakjoo Oh. *Context-Aware and Data-Driven Feedback Generation for Programming Assignments.* **ESEC/FSE 2021**: ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering

3. **Dowon Song**, Myungho Lee, and Hakjoo Oh. *Automatic and Scalable Detection of Logical Errors in Functional Programming Assignments.* **OOPSLA 2019**: ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications

4. Junho Lee, **Dowon Song**, Sunbeom So, and Hakjoo Oh. *Automatic Diagnosis and Correction of Logical Errors for Functional Programming Assignments*. **OOPSLA 2018**: ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications

Talks

1. Enhancing APR with PRISM: A Semantic-Based Approach to Overfitting Patch Detection. Paper presentation at OOPSLA 2025. Singapore. Oct 2025.
2. PRISM: 자동 수정 기술 성능 향상을 위한 의미기반 과적합 패치 탐지. STAAR Summer Workshop. Seoul, Jul 2025.
3. Context-Aware and Data-Driven Feedback Generation for Programming Assignments. STAAR Winter Workshop. Jeju, Feb 2022.
4. Context-Aware and Data-Driven Feedback Generation for Programming Assignments. Paper presentation at FSE 2021. Online, Aug 2021.
5. Automatic and Scalable Detection of Logical Errors in Functional Programming Assignments. Invited talk at KCC 2020. Online, Jul 2020.
6. Automatic and Scalable Detection of Logical Errors in Functional Programming Assignments. Paper presentation at OOPSLA 2019. Athens, Oct 2019.
7. Automatic Grading and Feedback Generation for Functional Programming Assignments. SIGPL Summer 2019. PyeongChang, Aug 2019.
8. Automatic Diagnosis and Correction of Logical Errors for Functional Programming Assignments. Invited talk at KCSE 2019. PyeongChang, Jan 2019.
9. Automatic Diagnosis and Correction of Logical Errors for Functional Programming Assignments. Invited talk at PLATEAU 2018. Boston, Nov 2018.