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Zhe Zhou

Homepage
GitHub
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EDUCATION

PhD of Computer Science 2018.8 – present
Purdue University, Advised by Prof. Suresh Jagannathan
Main courses: Programming Languages, Reasoning about Programs, Compiling and Programming Systems
Operating Systems, Pattern Recognition and Decision-Making Processes (GPA: 4.0)

Bachelor of Computer Science 2013.9 – 2017.7
Pecking University, Advised by Prof. Guangyu Sun

WORK EXPERIENCE

Full Time C++ Software Engineer 2017.7 – 2018.7
Megvii Beijing, China

RESEARCH INTEREST

Formal verification, automated verification, type system, property-based testing, specification inference, program synthesis

SKILLS&LANGUAGES

Mostly used: Ocaml, Coq, Z3
Familiar with: SML, C, C++, Java, Python, Scala, Haskell, Dafny

PUBLICATION

Data-Driven Abductive Inference of Library Specifications OOPSLA'21
Zhe Zhou, Robert Dickerson, Benjamin Delaware, and Suresh Jagannathan
(Distinguished Artifact)

Covering All the Bases: Type-based Verification of Test Input Generators PLDI'23
Zhe Zhou, Ashish Mishra, Benjamin Delaware, and Suresh Jagannathan
(Conditionally Accepted)

SERVICE

Artifact Evaluation Committee Member PLDI'23

PROJECT

Data-driven Specifications Inference OOPSLA'21
Design a data-driven inference procedure which is guided by counterexamples to infer specifications of multiple the blackbox library APIs that are consistent with the given whitebox client code.

Underapproximate Refinement Type System PLDI'23, In progress
Design a refinement type system that verifies the coverage property of the random test generator.

Machine learning for Program Synthesis In progress
Use the machine learning approaches (e.g., MCMC-based approach, transformer neural network) to learn expected programs.