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Zhe Zhou

Homepage
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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**
Peking 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

SERVICE

External Review Committee Member **OOPSLA'23**
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.