ZIHENG LIU

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Education

Pennsylvania State University (PSU)

Informatics, PhD   Aug. 2019 - Present

   Advisor: Dr. Linhai Song

  (Note: major changed from Nuclear Engineering)

Nuclear Engineering, PhD   Aug. 2018 - May. 2019

University of Science and Technology of China (USTC)

Bachelor of Engineering   Sep. 2014 - June. 2018

Academic Projects

Pennsylvania State University (PSU) and ByteDance AI Lab

Statically Detecting Go Concurrency Bugs   May. 2019 - Present

- Designing and implementing a suite of static checkers for Go systems

- Found 289 new bugs in popular Go projects, including 178 bugs fixed or confirmed

- Contributing to bug fixing for Docker, Kubernetes, Golang, etcd, among others

Pennsylvania State University (PSU)

Diagnosing Real-world Performance Problems   Feb. 2019 - May. 2019

- Applied statistical models to finding branches leading to performance problems

Pennsylvania State University (PSU)

Algorithm Profiling For Real-world Complexity Problems   Sep. 2018 - Feb. 2019

- Developed an algorithm to infer the complexity for a code region

- Reproduced real-world performance bugs from MySQL, Mozilla, Apache and others

Publication

Automatically Detecting and Fixing Concurrency Bugs in Go Software Systems
Ziheng Liu, Shuofei Zhu, Boqin Qin, Hao Chen, Linhai Song
(Under peer review)

Algorithmic Profiling for Real-world Complexity Problems
Boqin Qin, Tengfei Tu, Ziheng Liu, Tingting Yu, Linhai Song
(Under peer review)

Programming Language

Go; Python; C; Matlab; Rust