Zang, Zhiqiang

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https://github.com/cptgit
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Objective: Software Engineer Intern

Education

The University of Texas at Austin Austin, TX, U.S.

MS in Software Engineering and Systems GPA: 3.83/4.00 Expected Dec 2020 Aug 2018 – Present

Beijing University of Posts and Telecommunications Beijing, P.R. China

B.E. in Telecommunication Engineering GPA: 91/100 Rank: 11/556 Sep 2014 – Jun 2018

Internship

NIO Jul 2019 – Aug 2019

Summer Intern Mentor: Zhuo Cheng Beijing, P.R. China

Devised a technique of customizing APIs in the simulator to solve the insufficiency of APIs to retrieve data and control vehicles, which added variety to raw data acquired from the simulator

Projects

Towards Accelerating Code Coverage Collection Feb 2019 – Apr 2019

- Motivation: Reduce runtime overhead of **JaCoCo** caused by repetitive execution of instrumented code
- Techniques: Dynamic Instrumentation (**ASM** library and **Javaagent**)
- Results: Accelerated little because optimization itself introduces almost the same overhead as the gain

VeDebug: Video-based Time-travel Regression Debugging Tool for Java Aug 2018 – Nov 2018

- Motivation: Assist debugging by telling how and where two executions differ, e.g. due to flakiness
- Techniques: Dynamic Instrumentation (ASM library and Javaagent), **Record & Replay**
- Results: Identified the erroneous lines for two bugs in Apache Commons Math and Google **Guava**

RABot AID: Human-like RTS Game Bot Dec 2017 – May 2018

- Motivation: Let the bot play like a human by watching the screen and controlling keyboard/mouse
- Techniques: Deep Learning, **OpenCV**, Template Match, **TensorFlow** Object Detection API
- Results: Played against the AI embedded in the game with a win rate of over 80% under fixed conditions

Publications

VeDebug: Regression Debugging Tool for Java

B. Buhse, T. Wei, Z. Zang, A. Milicevic, and M. Gligoric, "VeDebug: Regression debugging tool for Java," in *2019 IEEE/ACM 41st International Conference on Software Engineering: Companion Proceedings*. IEEE Press, 2019, pp. 15–18

Awards

Undergraduate Top Prize Scholarship of BUPT Nomination (0.6%) Nov 2017
First Class Scholarship of BUPT Nov 2017
Qualcomm Innovation Scholarship (0.8%) × 2 Dec 2015 & 2016
Second Prize Award for National College Students Mathematical Competition Nov 2015

Skills

- Languages: Java, Bash, Alloy, Python, C/C++
- Tools: Emacs, Git, ASM