ZANG, ZHIQIANG

✛ Objective: Software Engineer/Research Intern

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📞 (+1) 737-333-2408 (US)
🔾 https://github.com/cptgit
🔗 https://rocketeer.buptra.net/

⚙ SKILLS

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

💼 INTERNSHIP

NIO   *AirSim, Unreal Engine, Simulator*   Jul 2019 – Aug 2019

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

- Refactored modules (sensor models, physics engine) of a physical and visual simulator for autonomous vehicles
- Created a workflow of adding new APIs to retrieve data and control vehicles in the simulator, contributing to the corporate internal documentation

✈ PROJECTS

VeDebug: Regression Debugging Tool for Java   *Profiling, Dynamic Instrumentation*   Aug 2018 – Nov 2018

Brief: VEDEBUG is a video-based time-travel regression debugging tool to advance users' debugging experience.

- Recorded and replayed execution traces by dynamic instrumentation using ASM library
- Evaluated tool's runtime overhead over different phases while running it on open-source projects

RABot AID: Human-like RTS Game AI   *Object Detection, Deep Learning*   Dec 2017 – May 2018

Brief: RABOT AID is a game bot designed for real-time strategy game *Command & Conquer: Yuri's Revenge*.

- Built an image dataset from gameplay videos using Python with OpenCV library
- Trained a SSD detector using TensorFlow Object Detection API to detect dynamic battlefield in gameplay
- Implemented a real-time decision strategy by combining image recognition and keyboard/mouse simulation, with a win rate of over 80% against the AI embedded in the game 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%) $\times$ 2	Dec 2015 & 2016
Second Prize Award for National College Students Mathematical Competition	Nov 2015

🎓 EDUCATION

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

Ph.D. in Software Engineering and Systems   GPA: 3.83/4.00   Expected May 2022   Aug 2018 – Present

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

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