

YAHUI SUN

yahuis@tamu.edu · <https://yahsun.me> · github.com/dopelsunce · +1(979)402-6022

EDUCATION

Texas A&M University (TAMU), College Station, TX
Ph.D. Student in Computer Science. 4.0/4.0 GPA.

Aug 2018 – Present
Advisor: Prof. Jeff Huang

Wuhan University, Wuhan, China
B.Sc. in Computer Science.

Sep 2014 – June 2018

EXPERIENCE

Research Intern, Microsoft, Redmond, WA (Remote in TX)

June 2020 - Sep 2020

- Implementing the Checked C compiler. Converting and evaluating Checked C on real-world C programs such as MUSL. Manager: David Tarditi.

Research Assistant, Texas A&M University, College Station, TX

Aug 2018 – Present

- Developed a tool to find high-level race conditions in Go programs. The tool has found new race conditions (confirmed by developers) in industry-sized codebases such as Kubernetes, Docker and CockroachDB.
- Designed and implemented a tool to detect concurrent use-after-free bugs dynamically in modern browsers such as Chromium and Firefox. The tool is able to detect more concurrent use-after-free bugs compared to ThreadSanitizer without false positives and at a comparable performance cost.
- Designed and implemented a model checker for concurrent Java programs. The model checker targets reachability properties and uses a new partial order reduction algorithm.

Software Engineer Intern, Eyepetizer, Beijing, China

Dec 2017 – Apr 2018

- Developed a web service (webpy, redis, Docker) for automatically generating customizable Wechat mini-apps for short video content providers who lack technology background, which was used by **over 100** short video platforms providing user-generated content in the first two months.
- Developed the backend APIs (webpy, Java Spring) for online configuring and monitoring the generated Wechat mini-apps, with an admin UI page used internally by the operational team.
- Rewrote the official Eyepetizer Wechat mini app and developed the Wechat app templates for third-party content providers.

Software Engineer Intern, Baidu, Beijing, China

July 2017 – Sep 2017

- Worked in the Growth Hacker team. Developed the frontend and backend (PHP) for displaying information aggregation cards in Baidu's search result pages, with **800K daily visits**.
- Developed an A/B test log processing pipeline for the Growth Hacker products in AWK and Python, deployed on Hadoop. Improved the log processing speed by up to **71%**.

TEACHING AND SERVICE

Teaching Assistant for Data Structure and Algorithms, TAMU

Fall 2019

Artifact Evaluation Committee

PLDI 2019

Sub-reviewers: OOPSLA 2020, FSE 2020, PPOPP 2020, ICSE 2019, PLDI 2019, FSE 2019, OOPSLA 2019

Journal sub-reviewers: TSE, TOSEM

SPECIALTIES

Languages: C++, Go, C, Python, Javascript, Java, Bash, Ruby, Lisp, AWK, PHP

Tools: Git, LLVM, Z3, libFuzzer, CBMC, Docker

Web Development: VueJS, AngularJS, Webpy, D3, Webpack, Redis, Java Spring, AWS

Misc: Inter-thread Synchronization, Lock-free Algorithms, Weak Memory Consistency