

Yuyang(Peter) Rong

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EDUCATION

UC Davis

Sep 2019 - Jun 2024

Ph.D. candidate in Computer Science

Davis, CA

- Research interest: software security, fuzzing, dynamic taint analysis.

ShanghaiTech University

Sep 2015 - Jun 2019

B.E. Computer Science and Technology

Shanghai, China

- GPA 3.80/4 (Ranking: 5/124)

EXPERIENCE

Bytedance

Jun 2020 - Sep 2020

Research Intern

Mountain View, CA

- Focus on improving fuzzing branch coverage using principled techniques;
- ***Valkyrie: Improving Fuzzing Performance Through Principled Techniques*** submitted to Euro S&P 2022.

Bytedance

Sep 2018 - Aug 2019

Research Intern

Beijing, China

- Security Lab lead by Prof. Hao Chen, main work focuses on integer overflow;
- Main focus on integer overflow, we trigger constrained integer overflow by instrumenting source code using **LLVM**;
- ***IntEgrity: finding integer errors by targeted fuzzing*** published on SecureComm 2020;

ShanghaiTech University

Nov 2017 - Jan 2018

Lab Intern

Shanghai, China

- By combining line search and trust region, we designed our subproblem algorithm;
- Implemented our algorithm and subproblem algorithm using Python and did extensive experiments;
- ***An inexact first-order method for constrained nonlinear optimization*** published on *Optimization Methods and Software*

ABB Group

Oct 2017 - Jun 2018

Research Intern

Shanghai, China

- Group of 10, Tried to combine robot arm and an indoor mobile car;
- Responsible for the software development of **navigation system**, **mapping system**, and **state machine**;
- Python, C++ and Robot Operating System(ROS) used.

STAR Lab, ShanghaiTech

Jun 2017 - Sep 2017

Lab Intern

Shanghai, China

- Supervised by Prof. Sören Schwertfeger in STAR Lab(Now MARS Lab);
- Investigated on **multi-robot mapping** to help fasten mapping process;
- Used VLP16, tried Gmapping, Cartographer and our modified version.

Screen++

Jun 2017 - Jun 2017

Team leader

Shanghai, China

- Proposed an application to connect all the screens in different platforms;
- Responsible for the software development & market model; I also did the final presentation;

- Python & Apache used. Group of 5 and won the **3rd prize** in iLab Hackathon.

SafeBox

Jun 2017 - Jul 2017

Team member

Shanghai, China

- Course project for graduate level Operating System, group of 2;
- Implemented a visualization technology to create a sandbox;
- Using *ptrace*, we catch every system call and fail the ones that we consider unsafe.
- Rust & C used on Linux.

TEACHING

ECS032A: Introduction to Programming

2020 Fall Quarter

Teaching Assistant

UC Davis

CS110: Computer Architecture I

2018 Spring Semester

Leading Teaching Assistant

ShanghaiTech

SI100C: Introduction to Computer Science

2017 Fall Semester

Leading Teaching Assistant

ShanghaiTech

SI100: Introduction to Information Science and Technology

2017 Spring Semester

Teaching Assistant

ShanghaiTech

CS100: Introduction to Programming

2016 Fall Semester

Teaching Assistant

ShanghaiTech

AWARDS

ShanghaiTech President's Scholarship

Nov 2016

Shanghai Scholarship

Oct 2016

TECHNICAL STRENGTHS

Programming Languages

Proficient: Rust; Frequent use: C++, C; Knowledgeable: Python

Frameworks

LLVM