YAZHOU TANG

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in yazhoutang

⌆ ADSWT518

C/C++

Python

Linux

Coq

Java/Kotlin

🎓 EDUCATION

Shanghai Jiao Tong University (SJTU), Shanghai, China Sept. 2019 – Jun. 2023 (expected)

B.E. in Computer Science and Technology

👥 INTERNSHIPS

VST-IDE Oct. 2021 – Present

Coq On-campus Research Internship, Mentor: Prof. Cao Qinxiang [CNCC Homepage] [VST Homepage]

- This project integrates Verified Software Toolchain (VST) with the C development environment to achieve "development-as-security".
- My task is mainly to check whether the entailment relations between assertions hold.
- Some of the results of this project were shared by Prof. Qinxiang Cao at the Technical Forum on "Domain Specific Languages and Secure Programming" in CNCC2022, entitled "From Program Verification to Secure Programming".

Verifying Redblack Tree's Source Code Safety Jan. 2021 – Sept. 2021

Coq Research Internship, Mentor: Prof. Cao Qinxiang [Slides] [Paper]

- The project is based on the separation logic, using Coq and VST to formally verify the correctness of the basic operations of the red-black tree implemented in C.
- I was responsible for the work related to the validation of the operation of lookup returning pointers.
- I studied the first volume of Software Foundations before starting the project.

</> PROJECTS

Data Flow Analysis Framework Apr. 2022

Java "Program Analysis and Verification" Course Project [Code & Report]

- In this project, I wrote a parser to analyze the syntax of "ToyIR" designed by the teacher and constructed control flow diagrams, and then analyzed the active variables and undefined variables.
- The project uses bit vectors and bit operations to store and compute the set of variables, improving the efficiency of program operation.

Naivegator: Recommendations for On-campus Destinations Oct. 2021 – Dec. 2021

Kotlin "SJTU-ByteDance Joint Course - Android Dev" Project [Code & Slides]

- The app makes recommendations for destinations such as cafeterias and study rooms based on real-time foot traffic, distance and user preferences.
- I was responsible for the front-end and back-end interface as well as obtaining real-time data via API.
- The project won the second prize in the SJTU Android Mobile Application Development Competition.

♡ HONORS AND AWARDS

Academic Progress Scholarship of Shanghai Jiao Tong University Nov. 2022
Excellence Award in World Robot Contest–VEX Robot [News Report] Dec. 2020
Three Good Student of Shanghai Jiao Tong University Nov. 2020
C Grade Outstanding Scholarship of Shanghai Jiao Tong University Nov. 2020

ⓘ Miscellaneous

- Volunteering: Shanghai Marathon 2020 volunteer
- Languages: English - Fluent (CET-6), Mandarin - Native speaker