Yazhou Tang

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🎓 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   On-campus 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 Development" 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.

⚙ Skills

- Programming Languages: C/C++, Python, Coq, Java, Kotlin
- Platform: Linux (proficient)
- Development: Android, Qt

♡ 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