Răzvan Ovidiu Wist
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https://github.com/wist18
Python, C/C++, Java, Scala, JavaScript

Education

Vrije Universiteit Amsterdam | Amsterdam, NL   Sep 2021 – Jul 2024
BSc. Computer Science (Honours); GPA: 8.5 / 10.0

"Tudor Vianu" National College of Computer Science | Bucharest, RO   Sep 2018 – Jun 2021
High school degree. Specialization Mathematics – Intensive Informatics.

Experience

Research Assistant, Vrije Universiteit Amsterdam | Amsterdam, NL   Jun 2021 – Present
As a research assistant, I conducted a research project on the topic of consistency in distributed systems, where I systematically explored the properties of a novel and policy-driven consistency model developed and published in earlier work of the AtLarge research group. To this end, I developed several new policies and evaluated them through real-world experiments. Currently, I am taking part in another research project for my BSc. thesis on the topic of speculative concurrent use-after-free vulnerabilities. The objective of the project is to create a LLVM pass that employs static analysis techniques that help identify the attack surface of such gadgets.

OLC Member, Vrije Universiteit Amsterdam | Amsterdam, NL   Jan 2022 – Present
As a member of the educational committee (in Dutch, OLC), I was responsible of improving the education quality for more than 1000 students enrolled in the Bachelor of Computer Science by actively proposing changes to the Faculty regulations and courses' structure, based on student evaluations.

Teaching Assistant, Vrije Universiteit Amsterdam | Amsterdam, NL   Sep 2022 – Jul 2023
I had the opportunity to be a teaching assistant for four different courses, where I hosted practical and tutoring sessions, going over the assignments and covered material, for classes of about 30 students each. Courses: Computer Programming in C++, Computational Thinking for Coders, Computer Organization and Computer Networks.

Personal Projects

Netcat
Netcat is the Swiss knife of networking, so why not create it in Python? Such a useful tool would be quite an asset if an attacker managed to find a way in. With it, one can read and write data across the network, meaning it can be used to execute remote commands, pass files back and forth, or even open up an interactive shell.

SPECache
This project contains a demo of a side channel attack that can be used to extract sensitive information from a target system. The attack is based on analyzing power consumption variations in the target system to infer information about its internal state.

Other projects I have developed include classic games, such as Snake and Tetris, an IJVM-byte emulator, an interactive shell (similar to bash), a custom-made FAT-16 Filesystem, a key-value store that can be accessed concurrently, and a custom memory allocator. Access to these projects can be granted upon request.

Leadership and Awards

- 1ˢᵗ place for implementing the fastest line-following robot algorithm in C++ out of 400 students in my academic year, using PID (Proportional-Integral-Derivative) concepts – Nov 2021 (Amsterdam, NL)
- Finalist at BRD First Tech Challenge Robotics Championship – March 2019 (Bucharest, RO)
- Winner at First Tech Challenge Dutch Open Robotics Championship – June 2018 (Delft, NL)
- Finalist at BRD First tech Challenge Robotics Championship – March 2018 (Bucharest, RO)

Certifications

In 2018 I enrolled into the "CS50's introduction to Computer Science" programming course offered by the Harvard University on the Edx online platform. This is an entry-level course taught by prof. David J. Malan, which provides the necessary information to allow students how to think algorithmically and solve problems efficiently. Topics of this course include abstraction, algorithms, data structures, encapsulation, resource management, security, software engineering and web development.

Additional Information

As part of my BSc. studies, I am undertaking the Honours programme of the Computer Science department, which offers me the opportunity to invest more in my own area of study and to broaden my horizon by taking an additional 30 ECTS load on top of my Bachelor degree 180 mandatory ECTS. Additionally, I am taking close to 30 ECTS worth of extracurricular courses.