Nureddin Kamadan

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https://github.com/nkamadan

EDUCATION

Sabanci University — Istanbul, Turkey
BS Computer Science and Engineering GPA:3.98 — *Sep 2018 - Jun 2022*

PUBLICATIONS

Conference Proceedings

- KAMADAN,N., ERTURK, E., GUNES, F., ONUS, M.E., (2021), AUTOMED: Smart Drug Tracking Automat and Mobile Application Providing Multiple Drug Tracking, International Academic Researches for Sustainability

RESEARCH EXPERIENCE

Undergraduate Research Student — Aug 2021 – Present
Sabanci University — *Istanbul, Turkey*
- Supervised by Prof. Erkay Savas and Prof. Cemal Yilmaz
- Developing a generic static analysis approach for detecting timing-based side channel attacks
- Reverse engineered the malicious programs and analyzed the behaviour of attacks.
- Developed a basic-block structure to be used in the static analysis tool.
- Developed measures to mitigate attackers from bypassing the static analysis tool.

Research Intern — Feb 2021 – Sep 2021
TUBITAK (Scientific and Technological Research Council of Turkey) — *Istanbul, Turkey*
- Worked in GIS / Real-Time Operating System project.
- Analyzed worst case execution time of TLSF dynamic memory allocator which is designed to be used in real-time embedded systems.
- Integrated gcov runtime library which is part of gcc's toolchain to various embedded targets ,say, powerPC by modifying the source code. Compiled fully-functioning cross compilers for various target architectures.

Undergraduate Teaching Assistant — Sep 2021 – Present
Sabanci University — *Istanbul, Turkey*
- CS307 - Operating Systems.
- I held weekly office hours to assist students with their homeworks and operating systems related questions
- I conducted recitation hours to explain the material covered in the lectures

Research Assistant — Jun 2020 – Sep 2020
Sabanci University — *Istanbul, Turkey*
- Developed new techniques/algorithms for matching problems in university placements, interview scheduling. Project was based on the article called "Stability of marriage and college admissions". which was written by D. Gale and L. S. Shapley

INDUSTRY EXPERIENCE

Candidate Software Engineer — Nov 2021 – Present
MilSOFT Software Technologies — *Istanbul, Turkey*
- Implementing various parts of MANET protocol stack in NATO standards.
- Working on Maritime Line of Sight Networking, Stanag 4691.

Software Engineer Intern — Sep 2020 – Oct 2020
Xtinge Technology — *Istanbul, Turkey*
- Developed a Unity application that works integratedly with SQLite database

PROJECTS

Developing a generic static analysis tool for detecting timing-based side channel attacks | *Radare2,Hopper Disasm.*
- Presented a novel approach to detect and prevent timing-based side channel attacks (i.e., timing attacks). The proposed approach is based on a simple observation that the time measurements required by the timing attacks differ from those required by the benign applications as these attacks need to measure the execution times of typically quite short-running operations.

AUTOMED | *Android Studio, Arduino* Feb 2021 – Aug 2021
- A hardware integrated mobile application for people who are especially polypharmacy or alzheimer patients to help them organize the times for their medicines. The project I developed prevents the patient from overdose, but also performs the function of sending notifications to the family when the drug is not taken.

Self-Health | *Android Studio, Arduino* May 2020 – Feb 2021
- I developed a telehealth system that allows the patient to communicate with the doctor remotely and sends the data (blood pressure, temperature etc.) obtained from the sensors provided by the project to the doctor to be diagnosed.

Braille-Read | *Android Studio, Arduino* Feb 2015 – Jun 2017
- I developed an electronic reading device for visually impaired individuals.
- In the project, I developed a glove on which 6 vibration motors that represent 6 dots of Braille alphabet are present. With the help of the application and the glove, visually impaired people can read any content that they upload to the application in Braille alphabet

SKILLS

Related Courses: Operating Systems, Computer Architectures, Cryptography, Computer Networks
Reverse Engineering: Radare2, Hopper Disassembler
Programming Languages: C/C++, Java, Python

AWARDS

Full-tuition scholarship Awarded for academic excellence
Sabanci University [2019,2020,2021,2022]

High Honor Student Dean List: High Honor
Sabanci University [2019,2020,2021]

STAR Scholar Received scholarship from TUBITAK for excellence in research
Scientific and Technological Research Council of Turkey [2020,2021]

Gold Medal Among participants from 83 countries
Genius Olympiad (State University of New York at Oswego) Jun 2016

Europe Finalist Google Science Fair
Google Aug 2016

Silver Medal Technology category
Bayer Feb 2016

Bronze Medal Portugal
International Ligth Year Science Olympiad Apr 2015

Silver Medal Bahrain
Nasser Bin Hamad International Youth Creativity Science Fair May 2016

Bronze Medal Third best project in Asia region
TUBITAK Feb 2015

REFERENCES

Prof. Dr. Erkay Savas Sabanci University
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Prof. Dr. Cemal Yilmaz Sabanci University
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Prof. Dr. Erdinc Ozturk Sabanci University
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