Roland Bogosi │ Curriculum Vitæ

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Ⓢ RoliSoft • ⑁ RoliSoft

Technical Skills

Languages: C#, Java, C/C++, Go, Python, PHP, JavaScript, SQL, VHDL, CAPL

Main Focus: Security research; Web, mobile and desktop development; System architecture design

Experience

Lateral Inc   **Târgu-Mureș**
Senior Security Engineer   *April 2017–Present*
Leading a one-man army in the field of security, responsible for security code reviews, penetration tests, incident response, aiding with GDPR/PCI/HIPAA compliance, and holding internal employee trainings regarding secure coding best practices.

Lateral Inc   **Târgu-Mureș**
Senior Software Engineer   *September 2016–Present*
Working with leading technologies in breakthrough research fields and in direct communication with high-profile clients. Pitched projects for the internal incubator and lead their development to marketable products.

Freelancer   **Târgu-Mureș**
Security Consultant   *August 2020–Present*
Working as a freelance security consultant providing clients on-demand penetration tests, application security assessments, infrastructure hardening and incident response services.

Lynx Solutions SRL   **Târgu-Mureș**
Software Engineer Internship   *July 2014–August 2014*
Took leadership, oversaw and helped fellow interns through their journey of implementing the internship project; solely developed alternative implementation and wrote project requirements documentation as going above-and-beyond.

Freelancer   **Târgu-Mureș**
Full Stack Engineer   *May 2013–August 2016*
Worked as a freelance full stack developer for various clients. Projects included developing and maintaining sites with 15 million unique visitors, re-architecting projects to address scalability issues, identifying and fixing performance bottlenecks in existing codebases, penetration tests and mitigation, screen-scraping where protections had to be bypassed or implemented.

Education

Sapientia EMTE, Faculty of Technical and Human Sciences   **Târgu-Mureș**
B.Sc. (Hons.) Computer Engineering   *September 2012–July 2016*
Gave multiple presentations in various fields as an extracurricular activity; attended both XIV. and XV. Scientific Students' Associations Conference with projects which both separately won awards; participated in four research groups with published scientific papers; graduated with a thesis in the field of Information Security, which received the maximal grade of 10.

Certifications, Trainings

Advanced Distributed Systems Design, Udi Dahan, Particular Software   *April 2020*

Process Communication Model, PCM soft-skills training   *November 2019*

Architect's Master Class, Juval Löwy, IDesign   *November 2019*

Offensive Security Certified Expert (OSCE), Offensive Security   *October 2018*

Neuroscience of Communication, LSI soft-skills training   *July 2018*

Offensive Security Certified Professional (OSCP), Offensive Security   *May 2017*

Security Specialist, Certified Secure   *May 2016*

Microcontrollers in Automotive Applications, Continental AG   *January 2016*

Awards, Honors, Media Attention & Volunteering

Cyber Volunteers 19   *May 2020*
During the coronavirus pandemic, worked with hospitals in the region to secure and harden their infrastructure against

attacks, whilst also acting as an incident response contact in case of emergency.

Hack the Box "Best of the Best" Award   *July 2017*

Achieved and maintained 1st place on the Hack the Box OSCP-like CTF game. Solved unintentional/unfinished challenges in order to get ahead, which were thought to be unhackable due to their unfinished state.

CERT-RO Coordinated Vulnerability Disclosure Program Pioneer   *March 2017*

Part of personal project endeavors and academic research, autonomously analyzed various banking infrastructure and **found critical issues** in at least **two leading Romanian banks**, of the *authentication and authorization bypass* level. Followed **responsible disclosure procedures**, notified the banks and the local CERT of these incidents. What followed was media attention in TV, radio, and online news, after **CERT-RO** published a congratulatory press release for being the first researcher to responsibly report to them: https://goo.gl/D3w8b3

XV. Scientific Students' Associations Conference Award   *April 2016*

Awarded for the "Black-Box Penetration Testing and Autonomous Vulnerability Assessment" research.

XIV. Scientific Students' Associations Conference Award   *April 2015*

Awarded for the "Sentiment Analysis of Social Networks" research.

Languages

Hungarian: Native proficiency

English, Romanian: Full professional proficiency

Publications

Black-Box Penetration Testing and Autonomous Vulnerability Assessment: Roland Bogosi; *XV. Scientific Students' Associations Conference*, 2016.

Sentiment Analysis of Social Networks: Katalin Tünde Jánosi-Rancz, Zoltán Kátai and Roland Bogosi; *Acta Universitatis Sapientiae, Informatica,* vol. 7, no. 2, pp. 186–199, 2015.

Deadbeat Disturbance Observer-based Rate Control in Wireless Networks for Moving Agents: Lőrinc Márton, Tamás Vajda and Roland Bogosi; *Research conducted under grant by Accenture Industrial Software..*

Linking Formal and Informal Structures Based on Faculty Members' Email Communication Patterns: Zoltán Kátai, Katalin Tünde Jánosi-Rancz and Roland Bogosi; *Pending publication.*

Clustering in Mathematical Databases: Szép Zoltán and Roland Bogosi; *XV. Scientific Students' Associations Conference*, 2016.

Characterizing the Distance Between Formal and Informal Organizational Structures: Katalin Tünde Jánosi-Rancz, Zoltán Kátai (and Roland Bogosi); *MathInfo: International Conference in mathematics and Informatics*, 2015.

Notable Open-Source Projects

Windows Subsystem for Linux Distribution Switcher: Project born out of sheer curiosity once WSL was announced, to see if I could swap the distribution shipped with WSL. A simple-to-use **Python** script was developed afterwards as a result, which was the first of its kind, and could swap in any distribution from an **ISO**, **rootfs tarball** or nearly any image on the **Docker Hub**. The repository has **1,400 stars** and 140 forks. It has been featured in several tutorial sites, including **kali.org**'s initial way to get **Kali Linux in WSL** before the app store package, and **acknowledged by Microsoft** as a "cool community project": https://goo.gl/GkVkAm

Host Scanner: Developed as an implementation companion to my bachelor's thesis with the purpose to perform **autonomous vulnerability assessment** using both active and passive scanning, or by analyzing earlier reports of 3rd-party tools. The features and implementation techniques are unique to this application, a fact which was validated by an **award-winning** presentation at the **XV. Scientific Students' Associations Conference**. The project was highlighted by several tutorial sites, including one of the supported data providers, **Mr. Looquer**, as a creative way to use their data. The application was developed in **C++** with strong **cross-platform** support with OS-specific implementations for *Linux*, *Windows* and *BSD/Darwin* systems. The various helper scripts were developed in **Go**.

RS TV Show Tracker: TV show tracking application with a unique feature set, with monthly updates pushed to **135,700 active daily users** (peak as of May 2015). The application was developed in **C#** with an interface in **WPF**. Development started in **February 2010** and halted in **January 2016** due to shifting priorities and avoidance of potential legal issues.

Full list of projects available on my GitHub profile and/or lab.rolisoft.net/projects.html

Interests & Early Personal Development

Self-teaching is an important aspect of my lifestyle, I constantly **try out new languages**, **new technologies**, **new practices**, and **re-do old projects**, where I challenge myself to do it much better this time, by setting much higher goals.

First exposure to the world of programming via PHP at the age of **11** followed by publishing the first dynamic webpage at the age of **12**. Published first **desktop application**, at the age of **13**, which utilized **databases**, **regular expressions**, **networking** and **screen-scraping**. Application was published to **Softpedia**, where it was accepted and reviewed by their staff, leading to a few hundred downloads during its lifetime. Received first income from **Google AdSense** at the age of **14**. Used **neural networks**, in order to train a software to **recognize** numbers and letters that appear on a webcam-provided image in **real-time**, at the age of **16**. Developed first **autonomous web-service** that relied on user-contributed data at the age of **17**, a **recommendation system**, which provides **tailored recommendations** based on a user's preference list.

Full timeline available at rolisoft.net/#education