

✉ lauri@koivunen.work

📍 Turku, Finland

EDUCATION

Master of Science, 2019

Networked Systems Security, University of Turku
MINOR GAME DEVELOPMENT

Bachelor of Science, 2015

Software engineering, electronics and communications, University of Turku
THESIS DEVELOPMENT OF COMPUTER WORMS AND COUNTERMEASURES
MINOR PHYSICS

High school graduate, 2011

Information Technology and Media track. Parallel studies included a few university courses and passed all Cisco Certified Network Associate courses.

RELEVANT EXPERIENCE

University of Turku,

Project Researcher, Department of Computing (2019 – 2022, ongoing)

Research Assistant, Department of Future Technologies (2017 – 2019)

Worked on several research projects closely with industry partners & customers.

Website consultation & development for multiple partner organizations.

Security and privacy research: participated in malware detection research (in collab. with F-Secure). Consulted a law firm on torrent traffic analysis.

Full-stack Software Development DevOps + DevOps teaching
M.Sc. Thesis supervision AWS consult: EC2 + RDS + S3 + Optimiz.

Research, Development and Maintenance on Flavoria® research platform (IoT, Linux servers, Kotlin, Python, anomaly detection, networking, hardware, etc.) (2019-2021)

Data analysis & Real-time visualization Website development + maintenance

Video editing, photography, audio setup, live streaming and 3D modelling (3ds Max)

Capstone project (2015 – 2016)

R&D on the subject of “Security solutions for an Internet of Things device” in a small team. <http://capstone.utu.fi/en-thingsec>

- Publication in IEEE Conference Proceedings

Defence forces, 2012, 6 months (9 months conscription)

WWW-administrator in *Public Information Division* of the *Defence Command Finland*. Among main responsibilities also provided nationwide education and remote support for press officers. Published the country’s yearly national military promotions.

- Promoted to Corporal by request of supervisor
- Recommendation letter from Head of Division

Volunteer, game research and development community (2009 – 2022, ongoing)

Volunteer within a multinational gaming and game development community in hobby capacity as a developer and as part of distributed leadership. Created complex systems both alone and in teams ranging from game servers maintenance automation in Linux to system extensions in C.

TECHNICAL SKILLS	Development	Python, Lua (LuaJIT), JS, C (embedded), C#, Bash, PHP, C++, Java (kotlin)
		<i>Linux, Windows</i> <i>VSCode, etc</i> <i>Kubernetes, CI, Git</i>
		<i>Systems administration</i> <i>Networks</i> <i>Teaching and support</i>
	Other	Technical documentation writing . All of Microsoft Office suite down to macro writing. Photography /image production from Adobe Lightroom to Photoshop. Video editing and filming with 3D modelling with 3DS Max.
	Certificates	IPv6 certificate, Hurricane Electric, 2014, maintained tunnel to 2021
LANGUAGES	Finnish	Native
	English	Fluent written and spoken. Held presentations in conferences.
	Swedish	Fluent written

PUBLICATIONS

[Evaluation of the Pedagogical Quality of Mobile Math Games in App Marketplaces](#) (2020) 2020 IEEE International Conference on Engineering, Technology and Innovation (ICE/ITMC) Samuli Laato, Renny Lindberg, Teemu H Laine, Phuong Bui, Boglarka Brezovszky, Lauri Koivunen, Olga De Troyer, Erno Lehtinen

[Increasing Customer Awareness on Food Waste at University Cafeteria with a Sensor-Based Intelligent Self-Serve Lunch Line](#) (2020) 2020 IEEE International Conference on Engineering, Technology and Innovation (ICE/ITMC) Lauri Koivunen, Samuli Laato, Sampsa Rauti, Juhani Naskali, Petri Nissilä, Pauliina Ojansivu, Tuomas Mäkilä, Mari Norrdal

[Towards Profiling Program Instances in Host-Based Intrusion Detection Systems by Recognizing Software Update Patterns](#) (2018) Proceedings of the 11th International Conference on Security of Information and Networks Koivunen L, Rauti S, Leppänen V

[Software Security Considerations for IoT](#) (2017) Proceedings of the 2016 IEEE International Conference on Internet of Things IEEE Green Computing and Communications IEEE Cyber, Physical, and Social Computing IEEE Smart Data Aki Koivu, Lauri Koivunen, Shohreh Hosseinzadeh, Samuel Lauren, Sami Hyrynsalmi, Sampsa Rauti, Ville Leppänen

[Applying Internal Interface Diversification to IoT Operating Systems](#) (2016) Proceedings of the 2016 International Conference on Software Security and Assurance (ICSSA) Lauri Koivunen, Sampsa Rauti, Ville Leppänen

[Interface Diversification in IoT Operating Systems](#) (2016) Proceedings of the 9th International Conference on Utility and Cloud Computing Mäki P, Rauti S, Hosseinzadeh S, Koivunen L, Leppänen V

PROJECTS	Security research projects (Mostly python publicly, C, C#, Kotlin, RTOS unpublished)	
	github.com/koivunen/connvis	Network connection visualization
	github.com/koivunen/whoisabusetool	Mass whois crawler