Krisztián **Szabó**

MASTER STUDENT IN COMPUTER SCIENCE - CYBER SECURITY AT UTWENTE

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Technologies

Programming Languages	Python 🐍, Shell scripting ➤_, SQL 🗄, Java ☕,
Libraries/Frameworks	Torch, Numpy, Pandas, Hugging Face, Jupyter, Django, PostgreSQL
OS's	Windows ⊞, MacOS , Ubuntu ; and open to learning any *nix 🐧
Tools	Git **git**, Docker 🐳, LaTeX, Android SDK 🤖
Languages	English (Cambridge C2), Hungarian (Mother tongue), Romanian

Education

University of Twente   *Enschede, Netherlands*

MASTERS COMPUTER SCIENCE - CYBERSECURITY SPECIALIZATION   *graduation expected by Jul 2025*

- **Skills Gained**: Cybersecurity strategy development, advanced data analysis, machine learning in security, privacy enhancement, risk management.

University of Twente   *Enschede, Netherlands*

BSC. TECHNICAL COMPUTER SCIENCE   *2023 Apr*

- *Thesis title*: Morphing robust face recognition: Compared the resiliency of state-of-the-art face recognition methods to adversarial attacks.
- **Skills Gained**: Software systems design, algorithm optimization, functional programming, abstract algebra applications, shell scripting.

Experiences

Arise - <u>Website, Linkedin</u>   *Leiden, Netherlands / Remote*

ML OPS RESEARCH INTERN - DOCKER / PYTHON / DJANGO / BACKEND / JIRA   *Nov 2022 - Present*

- Researched and implemented ML Ops frameworks (Weights and Biases, Mlflow, BentoML, ...) and built out pipelines for versioning and serving AI algorithms
- Implemented connection between HuggingFace models to be used in ARISE model selection
- Achieved an 89% accuracy in detecting humans with an algorithm fine tuned for wildlife cameras, currently used to delete images of humans from wildlife camera datasets due to GDPR, which I have also converted to run on <u>Snellius (Dutch Supercomputer)</u>
- Investigated the inner workings and repurposed an already existing AI challenge app to automatically create leaderboard on specified metrics to integrate with the above mentioned frameworks
- Contributed to the development of AI algorithms which detect and identify species based on their genetic code for <u>ARISE's platform</u>

BestJobs   *Targu Mures, Romania*

MACHINE LEARNING INTERN   *Jul 2019 - Aug 2019*

- Learned about and implemented Linear Regression Models
- Learning was largely based on Andrew Ng's coursera course named "Deep learning"

Projects

Human detection in biodiversity monitoring   *Made for <u>Arise</u>*

UNIVERSITY DESIGN MODULE GROUP PROJECT   *Sept - Nov 2022*

- Designed and developed an AI algorithm using computer vision to detect and filter out humans in heterogeneous camera trap data, accurately identifying human presence
- Developed a containerized algorithm evaluation webapp for generating various performance metrics graphs for AI developers at <u>Arise</u>. Code can be found <u>here</u>.
- Design Report can be found <u>here</u>.

Self learning security

SECURITY PROJECT   *Since 2022*

- Deployed canarytokens on hosted server at Hetzner using <u>https://github.com/thinkst/canarytokens</u>, deployed a canarytoken instance to research it's capabilities.
- Installed elasticsearch to learn about it's capabilities and filtering
- Began using hardware keys across every online service

Wappler integration

INTERNSHIP THROUGH UNIVERSITY MINOR

Sept 2021 - Nov 2021

- Researched and then implemented demos for visual programming frameworks in JavaScript for Wapplers no-code website building tool.
- Report can be found here

Home network upgrade

HOME PROJECT

2020 - 2021

- Completely upgraded my home networking stack to enable easier management/deployment for future home projects
- Learned a about the enterprise level networking equipment (Ubiquiti Edgemax and UniFi)
- Self hosting on Raspberry Pi's various software (HomeAssistant, Unifi Network Controller, PiHole)
- Configured VLAN for IoT devices

Self hostable and expandable IoT sensor home monitoring

UNIVERSITY GROUP PROJECT

- Developed a software which enables end users to self host and monitor sensor using MQTT
- Similar to home assistant/HASSIO
- Hardware used: Raspberry Pi, Arduinos with various sensors

Extracurricular Activities

Romanian Scouts / The Pathfinder Club

Romania

LEADER

Jun 2013 - Present

- Successfully coordinated and organized multiple week-long camps, overseeing all aspects of event planning, logistics, and execution.
- Designed and implemented a variety of engaging activities tailored to the participants' interests and needs, enhancing their overall camp experience.
- Demonstrated strong problem-solving skills and adaptability in dynamic, fast-paced settings.
- Photographed over 10 events, capturing key moments and effectively documenting the experiences for promotional and archival purposes, available at https://kepek.osker.ro.
- Media team leader for 5 camps

Security / Privacy / OSINT

INTEREST

- Highly interested in and deeply passionate about security, privacy and OSINT
- Participated in and follow as many workshops / webcasts / conference as I can, my favourites being Blackhills Infosec, and PancakesCon

Videography and Photography

HOBBY

- Have been practicing and learning photography since the age of 16, self-taught
- Picked up videography from the age of 19, self-taught
- Tools: Lightroom, Premier Pro, Sony A7 IV, Canon R5, iPhone 13 Pro