

CURRICULUM VITAE

Rebecca Acheampong

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PROFESSIONAL SUMMARY

Dynamic and detail-oriented PhD researcher in Cybersecurity with over three years of hands-on experience in security threat analysis, vulnerability assessment, and immersive XR system security. Proficient in modern tools such as Kubernetes, Docker, SIEM tools, and Unity for XR development. Skilled in designing security frameworks, publishing academic research, and collaborating with cross-functional teams. A proactive learner with strong problem-solving and communication skills, committed to advancing cybersecurity in innovative and industry-driven environments.

EDUCATION

Ph.D. in Computers and Information Technology

Transilvania University of Brasov - Brasov - Romania

10/2021 - Present

- *Research Focus: Cybersecurity in Extended Reality*

Master of Science in Cybersecurity

Transilvania University of Brasov – Brasov, Romania

10/2019 - 07/2021

BSc. Information Technology

University of Education Winneba – Kumasi, Ghana

09/2016 - 06/2018

HND Computer Science

Kumasi Technical University – Kumasi, Ghana

09/2007 - 06/2010

PROFESSIONAL CERTIFICATIONS

2021: Cisco Certificate of Completion in Threat Hunting

2020: CCNA Cybersecurity Operations

2013: CCNA: Networking for Home and Small Businesses

2013: CCNA: Working at a Small-to-Medium Businesses or ISP

2008: Certificate in Hardware and Software Systems Administration

PROFESSIONAL EXPERIENCE

GENSAVR Immersive App. (Horizon Europe – SPIRIT Project)
Research Assistant

Brasov, Romania
09/2024 - Present

- Led the security integration team for the GENSAVR application
- Deployed Kubernetes security monitoring with Kubescape
- Collaborated with scalability and portability teams for seamless integration of security measures
- Authored technical documentation, research articles, reports, and project dissemination materials

Transilvania University of Brasov
Graduate Researcher in Cybersecurity and Extended Reality

Brasov - Romania
10/2021 - Present

- Conducted comprehensive research on cybersecurity issues in XR technologies
- Designed experimental methods to evaluate security vulnerabilities in immersive environments
- Collaborated on interdisciplinary research, integrating IoT cybersecurity practices with XR solutions.

Rubico
Web development Student Intern

Brasov - Romania
07/2021- 10/2021

- Developed responsive user interfaces using Twig, HTML, Bootstrap, and JavaScript
- Applied version control systems for collaborative development and tracking

Ghana Baptist University College
IT Officer

Kumasi - Ghana
04/2013 - 11/2019

- Maintained IT infrastructure, networks and system administration tasks
- Maintained institutional website, email, and local software tools
- Conducted regular backups and ISP coordination for internet solutions

PUBLICATIONS

- **Acheampong, Rebecca**, Dorin-Mircea Popovici, Titus C. Balan, Alexandre Rekeraho, and Ionut-Alexandru Oprea. "A Cybersecurity Risk Assessment for Enhanced Security in Virtual Reality." *Information* 16, no. 6 (2025): 430. <https://doi.org/10.3390/info16060430>
- **Acheampong Rebecca**, Dorin-Mircea Popovici, Titus Balan, Alexandre Rekeraho, and Manuel Soto Ramos. "Enhancing Security and Authenticity in Immersive Environments." *Information* 16, no. 3 (2025): 191. <https://doi.org/10.3390/info16030191>

- **Acheampong, R.,** Balan, T.C., Popovici, DM. et al. Balancing usability, user experience, security and privacy in XR systems: a multidimensional approach. *Int. J. Inf. Secur.* 24, 112 (2025). <https://doi.org/10.1007/s10207-025-01025-z>
- **Acheampong Rebecca,** Titus Constantin Balan, Dorin-Mircea Popovici, and Alexandre Rekeraho. "Embracing XR system without compromising on security and privacy." In *International Conference on Extended Reality*, pp. 104-120. Cham: Springer Nature Switzerland, 2023. https://doi.org/10.1007/978-3-031-43401-3_7
- Rekeraho, Alexandre, Daniel Tudor Cotfas, Petru Adrian Cotfas, Emmanuel Tuyishime, Titus Constantin Balan, and **Rebecca Acheampong.** "Enhancing Security for IoT-Based Smart Renewable Energy Remote Monitoring Systems." *Electronics* 13, no. 4 (2024): 756. <https://doi.org/10.3390/electronics13040756>
- Rekeraho, Alexandre, Daniel Tudor Cotfas, Titus C. Balan, Petru Adrian Cotfas, **Rebecca Acheampong,** and Emmanuel Tuyishime. "Cybersecurity Threat Modeling for IoT-Integrated Smart Solar Energy Systems: Strengthening Resilience for Global Energy Sustainability." *Sustainability* 17, no. 6 (2025): 2386. <https://doi.org/10.3390/su17062386>
- Rekeraho, Alexandre, Daniel Tudor Cotfas, Petru Adrian Cotfas, Titus Constantin Bălan, Emmanuel Tuyishime, and **Rebecca Acheampong.** "Cybersecurity challenges in IoT-based smart renewable energy." *International Journal of Information Security* 23, no. 1 (2024): 101-117. <https://doi.org/10.1007/s10207-023-00732-9>
- **Acheampong Rebecca,** Titus Constantin Bălan, Dorin-Mircea Popovici, and Alexandre Rekeraho. "Security scenarios automation and deployment in virtual environment using ansible." In *2022 14th International Conference on Communications (COMM)*, pp. 1-7. IEEE, 2022. doi: [10.1109/COMM54429.2022.9817150](https://doi.org/10.1109/COMM54429.2022.9817150)
- Rekeraho, T. Balan, D. T. Cotfas, P. A. Cotfas, **R. Acheampong** and C. Musuroi, "Sandbox Integrated Gateway for the Discovery of Cybersecurity Vulnerabilities," *2022 International Symposium on Electronics and Telecommunications (ISETC)*, Timisoara, Romania, 2022, pp. 1-4, doi: [10.1109/ISETC56213.2022.10010327](https://doi.org/10.1109/ISETC56213.2022.10010327)
- RAMOS, M. S., **ACHEAMPONG, R.,** & POPOVICI, D. M. A multimodal interaction solutions."The Way" for educational resources. *ON VIRTUAL LEARNING-ICVL 2023*, 79. <https://doi.org/10.58503/icvl-v18y202306>

TECHNICAL SKILLS

- **Immersive Technologies:** Unity 3D, C# for Unity, Nakama Server, XR Compliance Design
- **Cybersecurity Tools:** Metasploit, OWASP ZAP, Kubescape, ARMO, Nessus, Nikto, Wireshark
- **Cloud & DevOps:** Ansible, VMware vSphere, Docker, Kubernetes
- **Cryptography:** RSA-2048, SHA-256, Digital Signature Integration,
- **SIEM Platforms:** Wazuh, Microsoft Azure, Sentinel, Elastic stack
- **Networking:** Cisco Routing and Switching Configuration, GNS3, Cisco Packet Tracer, PfSense

- **Web Development:** Html 5, CSS, JavaScript, Bootstrap, Drupal
- **Programming language:** Python, Visual Studio Code, Git, Linux.

SOFT SKILLS

- Effective Communication | Problem-solving | Team Collaboration
- Analytical Thinking | Adaptability | Organizational Skills

HOBBIES

Reading, Writing, Music, Cleaning, Socializing, Tennis

REFERENCES

Prof. Dr. Dorin-Mircea Popovici
Professor at Ovidius University of Constanta
Department of Mathematics and Computer Science

Titus Balan
Professor at Transilvania University of Brasov
Faculty of Electrical Engineering and Computer Science