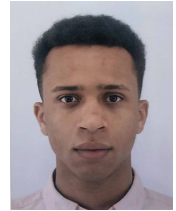# Olivier Bemba

✉ obemba3@gatech.edu   **in** LinkedIn   ○ GitHub   🌐 Personal Website

Education

Aug. 2024 – PRESENT	🔖 **Georgia Institute of Technology, College of Computing**
	Atlanta, GA, USA
	• PhD in Computer Science
	• Co-advised by Prof. Cecilia Testart & Prof. Alberto Dainotti
Aug. 2022 – May 2024	🔖 **Georgia Institute of Technology, College of Engineering**
	Atlanta, GA, USA
	• Master of Science in Electrical & Computer Engineering
	• Co-advised by Prof. Cecilia Testart & Prof. Alberto Dainotti
Sept. 2020 – Jun. 2022	🔖 **Telecom SudParis**
	Evry, France
	• General Engineering Master's Program

Employment History

Aug. 2024 - PRESENT	🔖 **Graduate Research Assistant** - Georgia Tech, Internet Intelligence Lab
	Atlanta, GA, USA
	• Supervised by Prof. Alberto Dainotti & Prof. Cecilia Testart
	• Improving Multiple Origin AS prefix classification to better detect BGP hijacking
May 2024 - Aug. 2024	🔖 **Research Intern** - French Cybersecurity Agency (ANSSI)
	Rennes, France
	• Supervised by François Contat
	• Improving TaBi, a Multiple Origin AS prefix detection system
Jan. 2023 - Jun. 2023	🔖 **Research Intern** - NICT
	Tokyo, Japan
	• Supervised by Dr. Fabien Charmet, Prof. Gregory Blanc, Dr. Akira Tanaka & Dr. Takeshi Takahashi
	• Developed a web crawler for phishtank.org to collect phishing URLs and phishing website screenshots
	• Adapted Grad-CAM XAI method for Convolutional Neural Networks outputing feature vectors
Jun. 2021 - Aug. 2021	🔖 **SOC Analyst Intern** - Login Securite
	Paris, France
	• Supervised by Guillaume Buffier
	• Alert triage, incident investigation and detection, Incident response, continuous improvement of detection

Teaching Experience

Aug. 2023 - May 2024   **Graduate Teaching Assistant** - Georgia Institute of Technology
Atlanta, GA, USA
- Course: CS6250 - Computer Networks
- Taught by Prof. Alberto Dainotti & Prof. Cecilia Testart

Aug. 2022 - Dec. 2022   **Graduate Teaching Assistant** - Georgia Institute of Technology Europe
Metz, France
- Course: ECE2031 - Digital Design Laboratory
- Taught by Prof. Simon Gautier

Selected Projects

Aug. 2023 - Dec. 2023   **Improved BGP Events (in GRIP) Classification using Machine Learning**
- Applied Scikit-Learn K-Means implementation on GRIP default events
- Significantly reduced the number of default event categorizations (86% reduction)
- Gave GRIP users more justified insight into events without further inspection

Jan. 2022 - Jun. 2022   **Automatic input generation for attack graph generation and remediation selection from network scans**
- Developed a parser in Java to traduce Nessus (network scan software) output to an input for Mulval (attack graph generation tool)

Research Publications

1. O. Bemba, "A first look at autonomous systems recurrently causing bgp origination conflicts," M.S. thesis, Georgia Institute of Technology, 2024. 🔗 URL: https://hdl.handle.net/1853/75325.

2. O. Bemba, C. Testart, and A. Dainotti, "Poster: Investigating autonomous systems recurrently causing unexplained (sub)moas events," in *Proceedings of the 2024 ACM on Internet Measurement Conference*, 2024.

Skills

Languages	French: native, English: spoken and written
Programming	Python, Java, C, P4
Technologies	Git, Maven, Makefile
Machine Learning	Scikit-learn, TensorFlow, PyTorch
Software Programming	Object-oriented programming, algorithm design, data structures
Databases	MySQL, PostgreSQL, ElasticSearch