

COLLINS W. MUNYENDO

800 22nd St NW, Washington, DC 20052, United States

Email: cmunyendo@gwu.edu | Website: <https://collinsmunyendo.github.io>

EDUCATION

The George Washington University

PhD in Computer Science

Advisor: Prof. Adam J. Aviv

Washington, DC, USA

Aug, 2020 - Present

Carnegie Mellon University

Masters of Science in Information Technology

Advisors: Profs. Tim X. Brown and Martin Saint

Pittsburgh, PA, USA

Jul, 2017 - Dec, 2018

Strathmore University

Bachelor of Business Information Technology

Advisor: Prof. Jared Mayieka

Nairobi, Kenya

Jul, 2012 - May, 2016

CONFERENCE PUBLICATIONS

9. Collins W. Munyendo, Peter Mayer, and Adam J. Aviv. “I just stopped using one and started using the other”: Motivations, Techniques, and Challenges When Switching Password Managers. In *Proceedings of the 30th ACM Conference on Computer and Communications Security (CCS '23)*, Copenhagen, Denmark. November 2023.
8. Daniel V. Bailey, Collins W. Munyendo, Hunter A. Dyer, Miles Grant, Philipp Markert, and Adam J. Aviv. “Someone Definitely Used 0000”: Strategies, Performance, and User Perception of Novice Smartphone-Unlock PIN-Guessers. In *Proceedings of the European Symposium on Usable Security (EuroUSEC '23)*, Copenhagen, Denmark. October 2023.
7. Collins W. Munyendo, Yasemin Acar, and Adam J. Aviv. “In Eighty Percent of the Cases, I Select the Password for Them”: Security and Privacy Challenges, Advice, and Opportunities at Cybercafes in Kenya. In *Proceedings of the 44th IEEE Symposium on Security and Privacy (IEEE S&P '23)*, San Francisco, CA, USA. May 2023.
Distinguished Paper Award.
6. Xiaoyuan Wu, Collins W. Munyendo, Eddie Cosic, Genevieve A. Flynn, Olivia Legault, and Adam J. Aviv. User Perceptions of Five-Word Passwords. In *Proceedings of the 38th Annual Computer Security Applications Conference (ACSAC '22)*, Austin, TX, USA. December 2022.
5. Collins W. Munyendo, Philipp Markert, Alexandra Nisenoff, Miles Grant, Elena Korkes, Blase Ur, and Adam J. Aviv. “The Same PIN, Just Longer”: On the (In)Security of Upgrading PINs from 4 to 6 digits. In *Proceedings of the 31st USENIX Security Symposium (USENIX Security '22)*, Boston, MA, USA. August 2022.
4. Peter Mayer, Collins W. Munyendo, Michelle L. Mazurek, and Adam J. Aviv. Why Users (Don't) Use Password Managers at a Large Educational Institution. In *Proceedings of the 31st USENIX Security Symposium (USENIX Security '22)*, Boston, MA, USA. August 2022.
3. Collins W. Munyendo, Yasemin Acar, and Adam J. Aviv. “Desperate Times Call for Desperate Measures”: User Concerns with Mobile Loan Apps in Kenya. In *Proceedings of the 43rd IEEE Symposium on Security and Privacy (IEEE S&P '22)*, San Francisco, CA, USA. May 2022.
2. Noel Warford, Collins W. Munyendo, Ashna Mediratta, Adam J. Aviv, and Michelle L. Mazurek. Strategies and Perceived Risks of Sending Sensitive Documents. In *Proceedings of the 30th USENIX Security Symposium (USENIX Security '21)*, Virtual Conference. August 2021.
1. Collins W. Munyendo, Miles Grant, Philipp Markert, Timothy J. Forman, and Adam J. Aviv. Using a Blocklist to Improve Security of User Selection of Android Patterns. In *Proceedings of the 17th Symposium on Usable Privacy and Security (SOUPS '21)*, Virtual Conference. August 2021.

WORKSHOP PUBLICATIONS

1. Mindy Tran*, Harshini Sri Ramulu*, Collins W. Munyendo*, Rachel Gonzalez Rodriguez, Luisa Ball Schnell, Cora Sula, Joseph Ogren, Karim Alami, Lucy Simko, Anna Lena Rotthaler, and Yasemin Acar. Security and Privacy Challenges and Concerns When Moving to the United States. In *Proceedings of the CHI'23 Workshop on Migration, Security & Privacy*, Hamburg, Germany. April 2023.

* denotes co-first authors.

TALKS

Conference Talks

4. “In Eighty Percent of the Cases, I Select the Password for Them”: Security and Privacy Challenges, Advice, and Opportunities at Cybercafes in Kenya. *44th IEEE Symposium on Security and Privacy (IEEE S&P '23)*, San Francisco, CA, USA. May, 2023.
3. “The Same PIN, Just Longer”: On the (In)Security of Upgrading PINs from 4 to 6 digits. *31st USENIX Security Symposium*, Boston, MA, USA. August, 2022.
2. “Desperate Times Call for Desperate Measures”: User Concerns with Mobile Loan Apps in Kenya. *43rd IEEE Symposium on Security and Privacy (IEEE S&P '22)*, San Francisco, CA, USA. May, 2022.
1. Using a Blocklist to Improve the Security of User Selection of Android Patterns. *17th Symposium on Usable Privacy and Security (SOUPS '21)*, Virtual Conference. August, 2021.

Invited Talks

8. “In Eighty Percent of the Cases, I Select the Password for Them”: Security and Privacy Challenges, Advice, and Opportunities at Cybercafes in Kenya. *Security and Privacy Engineering Laboratory*, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland. July, 2023.
7. “In Eighty Percent of the Cases, I Select the Password for Them”: Security and Privacy Challenges, Advice, and Opportunities at Cybercafes in Kenya. Paderborn University, Germany. June, 2023.
6. “In Eighty Percent of the Cases, I Select the Password for Them”: Security and Privacy Challenges, Advice, and Opportunities at Cybercafes in Kenya. *Capital-Area Colloquium on Trustworthy and Usable Security/Privacy (CACTUS/P)*, College Park, MD, USA. May, 2023.
5. “The Same PIN, Just Longer”: On the (In)Security of Upgrading PINs from 4 to 6 digits. *PasswordsCon*, Bergen, Norway. May, 2023.
4. Computer Security and Privacy at Cybercafes in Kenya. *Capital-Area Colloquium on Trustworthy and Usable Security/Privacy (CACTUS/P)*, Pittsburgh, PA, USA. December, 2022.
3. “Desperate Times Call for Desperate Measures”: User Concerns with Mobile Loan Apps in Kenya. *Security and Privacy Engineering Laboratory*, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland. November, 2022.
2. “Desperate Times Call for Desperate Measures”: User Concerns with Mobile Loan Apps in Kenya. *Capital-Area Colloquium on Trustworthy and Usable Security/Privacy (CACTUS/P)*, Washington DC, USA. May, 2022.
1. “Desperate Times Call for Desperate Measures”: User Concerns with Mobile Loan Apps in Kenya. *Security and Privacy Research Lab*, University of Washington, Seattle, WA, USA. May, 2022.

INDUSTRY EXPERIENCE

Max Planck Institute for Security and Privacy

Summer Research Intern

Bochum, Germany
May, 2023 – Aug, 2023

- Researching the security and privacy needs of traditionally understudied groups with Yixin Zou and Elissa Redmiles.

Silensec Limited

Information Security Consultant

Nairobi, Kenya
Oct, 2018 – Jul, 2021

- Secured the digital infrastructure of the company and its clients' by monitoring security events, alerts and incoming issues.
- Administered security training to both internal employees and the company's customers through CYBER RANGES.

Leaf Global Fintech

Software Engineer Intern

Evergreen, CO, USA
Aug, 2018 – Dec, 2018

- Developed a USSD-to-blockchain system to enable refugees in Africa transfer value across borders when escaping adversity.

TeleTracking Technologies

Software Engineer Intern

Pittsburgh, PA, USA
May, 2018 – Aug, 2018

- Worked in a team to research and improve patient flow for Rwanda's healthcare system through the development of a USSD scheduling application to reduce patient waiting.

Triple S Solutions

Technical Sales Intern

Nairobi, Kenya

Nov, 2016 – Apr, 2017

- Designed bio-metric security solutions for new and existing customers, and provided them with technical product support.

Kenya Web Limited

Network Engineer Intern

Nairobi, Kenya

Mar, 2015 – Jun, 2015

- Worked with other employees to set up and fix network problems for more than fifty customers.
- Revamped and repurposed faulty computers and other equipment in the technical department.

TEACHING EXPERIENCE

Carnegie Mellon University

- Graduate Teaching Assistant, Linux Programming (Fall 2019, 2020 and 2021)
- Graduate Teaching Assistant, First Year Seminar (Fall 2018 and Spring 2019)

PROFESSIONAL SERVICE

Program Committee

- ASIACCS (2024)
- EuroUSEC (2023)

Poster Jury

- SOUPS (2023)

External Reviewing

- CHI (2023)
- CHI LBW (2022, 2023)
- IEEE TDSC (2023)

GW Committees

- Student Representative, GW Data Privacy Consultative Committee (2023)
- Member, GW Data Privacy Committee (2022)

STUDENT MENTORING

The George Washington University

- Xiaoyuan Wu (Undergraduate)
- Eddie Cosic (Undergraduate)
- Elena Korkes (Undergraduate)
- Victoria Hennemann (Undergraduate)
- Miles Grant (Undergraduate)
- Darika Shaibekova (Masters)

Carnegie Mellon University

- Julius Mkumbo (Masters)
- Kizito Nyuytiyimbii (Masters)

PRESS COVERAGE

- Predatory Loan Apps in India Rake in Huge Fees, and Are Driving Some Users to Suicide (TechCrunch, 2022)
- How Android Unlocking Patterns Could Be Made More Secure. (Tech Xplore, 2021)

HONORS AND AWARDS

Paper Awards

- Distinguished Paper Award, 2023 IEEE Symposium on Security and Privacy

Conference Travel Grants

- PETS 2023 (Lausanne, Switzerland)
- Uptime 2022 (Amsterdam, Netherlands)

- SOUPS 2021 (Virtual)
- GREPSEC 2021 (Virtual)
- DEVCON 2019 (Osaka, Japan)
- HashiConf 2019 (Seattle, Washington)

Other Awards

- Cisco Cybersecurity Scholarship (2016)
- Dean's List, Strathmore University (2015, 2016)
- Best Overall Student, Bumini Primary School (2008)

LEADERSHIP AND SERVICE**The George Washington University**

- Student Leader, Bridges International (2022 - present)

Carnegie Mellon University

- CSO, Software Engineering Club (2018)
- President, Techy Talkers Toastmasters Club (2018)

Strathmore University

- Volunteer, Community Outreach Program (2012 - 2016)
- Vice President, Strathmore University IT Students Association (2015 - 2016)

Mentorship and Volunteering

- Volunteer, Nipe Sauti Africa (2016 - present)
- Mentor, Django Girls Kigali (2017 - 2020)