

BRIDGING THE DIGITAL
INCLUSION AND EQUITY GAP
FOR EMERGING ECONOMIES



CyLab-Africa

Carnegie Mellon University Security and Privacy Initiative

The African economy is projected to grow rapidly over the next five years. In order to drive digital inclusion alongside that growth, big improvements need to be made to the security and resilience of the continent’s financial technologies and infrastructure. The CyLab-Africa initiative, a collaboration between Carnegie Mellon University’s CyLab Security and Privacy Institute and Carnegie Mellon University Africa, aims to improve the cybersecurity of digital systems in Africa and other emerging economies.

Goals

RESEARCH

Conduct research to better understand the cybersecurity problems faced in African countries and other emerging economies, as well as potential solutions.

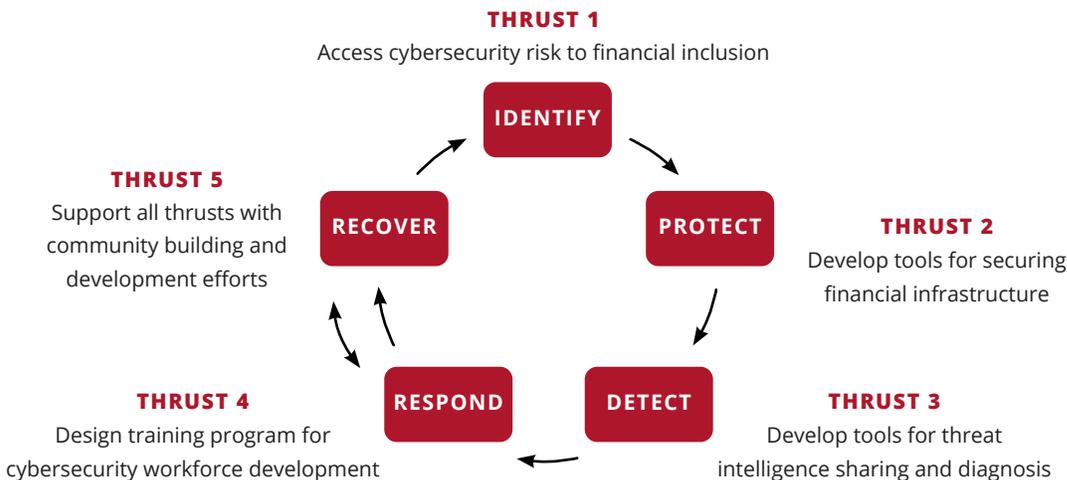
EDUCATION AND WORKFORCE DEVELOPMENT

Explore ways to supplement existing cybersecurity programs (e.g. CMU-Africa’s degree offerings, CMU CyLab’s picoCTF) and assess opportunities for new programs for both students and professionals.

ENGAGING WITH ORGANIZATIONS

Work alongside a variety of organizations from governments to international agencies to better understand the current challenges and bring together the relevant stakeholders needed to improve cybersecurity across the continent.

Initial Research Thrusts



ABOUT CMU-AFRICA

CMU-Africa was established in 2011 through a partnership between Carnegie Mellon and the Government of Rwanda. The location offers graduate degrees through Carnegie Mellon’s top-ranked College of Engineering in information technology, electrical and computer engineering, and engineering artificial intelligence with the same standards, curricula and requirements as its Pittsburgh campus. The program has educated more than 400 students representing 21 nationalities on the continent. CMU-Africa is addressing the critical shortage of high quality engineering talent required to accelerate development in Africa—home to the fastest growing workforce in the world.

ABOUT CYLAB

CyLab was established in 2003 and is CMU’s security and privacy research institute. With physical space in the Collaborative Innovation Center on the Pittsburgh campus and over 130 faculty, CyLab brings together experts from all schools across the University, encompassing the fields of engineering, computer science, public policy, information systems, business, humanities, and social sciences.

CyLab-Africa Faculty Team

BRIDGING THE OCEAN TO BRING TOGETHER CMU-AFRICA

CYLAB RESEARCHERS

PITTSBURGH, PENNSYLVANIA

KIGALI, RWANDA

Giulia Fanti
DISTRIBUTED SYSTEMS, MACHINE LEARNING, SECURITY & PRIVACY

Conrad Tucker
SECURITY, SYSTEMS, MACHINE LEARNING

Vyas Sekar
SOFTWARE DEFINED NETWORKS, NETWORK & SYSTEMS SECURITY

Lorrie Cranor
USABLE PRIVACY AND SECURITY

Assane Gueye
COMMUNICATIONS SYSTEMS, CYBERSECURITY, ICT4D

Jema Ndirwile
USABLE PRIVACY AND SECURITY, HACKING COUNTERMEASURES

Edwin Kairu
INFORMATION SECURITY

Edith Luhanga
USABLE SECURITY AND PRIVACY

Get Involved

OPPORTUNITY	DESCRIPTION
Initiative Research Program	<ul style="list-style-type: none"> Help drive research in specific targeted areas through invitation-only program events and participation on a steering committee along with CMU faculty and other sponsors. Shared research area initiatives may include CyLab Africa Initiative, Future Enterprise Security Initiative, and Secure Blockchain Initiative.
Institute-Wide Research Seed Funding Program	<ul style="list-style-type: none"> Guide security and privacy research through participation on a steering committee along with CyLab faculty
Targeted Research Projects	<ul style="list-style-type: none"> Select a research project proposed by CyLab faculty on a topic of mutual interest
Visiting Researcher in Pittsburgh or Kigali	<ul style="list-style-type: none"> Placement as a visiting research engineer or scientist at CyLab from 6-months to 1-year
Branded Sponsorships	<ul style="list-style-type: none"> Sponsorship of picoCTF cybersecurity STEM remote learning platform and competition Sponsorships for seminars held in Pittsburgh or Kigali
Student Diversity, Equity, and Inclusion Sponsor	<ul style="list-style-type: none"> Sponsorship of the CyLab program providing paid research internships for undergraduate and graduate students working at CMU under the guidance of CyLab faculty
Named Fellowship	<ul style="list-style-type: none"> Financial fellowship(s) for CMU students in Information Security or Privacy Studies in the name of the partner

RESEARCH ENGAGEMENT

EDUCATIONAL ENGAGEMENT



Contact

The CyLab-Africa team is interested in working with other organizations and institutions to improve digital inclusion in Africa and other developing nations. If you or your institution are interested in getting involved or learning more, please contact:

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