

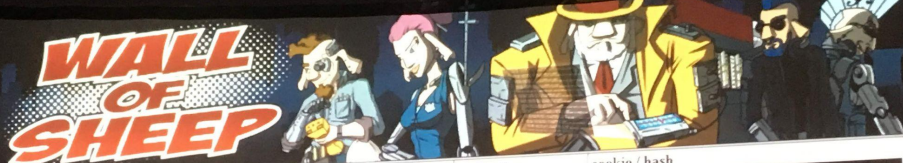
The Tufts Cybersecurity Clinic

Ming Chow
ming.chow@tufts.edu
BostonCISO
October 22, 2025



About Me

- Teaching Professor at Tufts University
- Founder and Director of Tufts Cybersecurity Clinic
- Senior Member / Shepherd of the Wall of Sheep team



login	pass	domain ip	application	cookie / hash
admin	*\$*****	ec2-54-201-295-19.us-w	HTTP	looks like SQL injection
2cec16df9c804653b2922cfac973a64	3j*****	65.77.227.20	HTTP	zadiak servlet
lououtin@aol.com	red*****	104.31.86.204	HTTP	
47e98e2131b488ab92957f3e02b570a7	08a*****	api.socialhoney.co	HTTP	
sorensop	580*****	earthlink.net	POP3	
lankaesh	!a*****	leguin.freemove.net	IRC	
mall001	SHE*****	mail.emome.net	HTTP	revealed IMEI
ahernandez	sic*****	sicapsrv.sicap.com.mx	HTTP	
wsclient	sup*****	wwwapp.aftonblad.se	HTTP	
soft001	jum*****	mail.enome.net	HTTP	
sportcaster	ome*****	crossports.com	HTTP	
btapi	bt0*****	pdf.business-times.com	HTTP	
jdupond@yopmail.com	jdu*****	api.gabrys.net	HTTP	
csv	pan*****	csv.pd.appbank.net	HTTP	
tmpark	jus*****	popeye.snu.ac.kr	POP3	
defkor	nio*****	ironhide.gtisc.gatech.edu	HTTP	password change
defkor	qla*****	ironhide.gtisc.gatech.edu	HTTP	
producer	pus*****	pushnotifications.timeso	HTTP	
musah@optonline.net	lib*****	optonline.net	POP3	
visitor	VIS*****	hc3.homeip.net	HTTP	
csr11	dNN*****	sgco.samsung.csribs.com	HTTP	
2014xx@sjtu.edu.cn	yua*****	mailstore05.sjtu.edu.cn	POP3	
EAV-015685765	d29*****	update.eset.com	HTTP	
boxer	13f*****	boxerupgrades.getboxer	HTTP	

Wall of Sheep ® - Copyright © 2001-2016 - All rights reserved - www.wall-of-sheep.com

About the Tufts Cybersecurity Clinic

- Student teams work with underserved, under-resourced nonprofit organizations on cybersecurity matters
- *Pro bono*
- For students: real work experience
- For nonprofit organizations: receive cybersecurity services
- For Commonwealth of Massachusetts: workforce development
- For Tufts University: public good service

Why We Created The Cybersecurity Clinic?

- Originally, to push forward the creation of the Tufts Cybersecurity Center for the Public Good
- It would turn out to be something far greater...

Projects and Tasks We Have Done So Far

- Password policies
- Google Drive audits for sensitive data
- WordPress website security assessment
- Provide insight on implementation for a Digital Asset Management (DAM) system
- Phishing and onboarding training for volunteers
- File system setup and backup

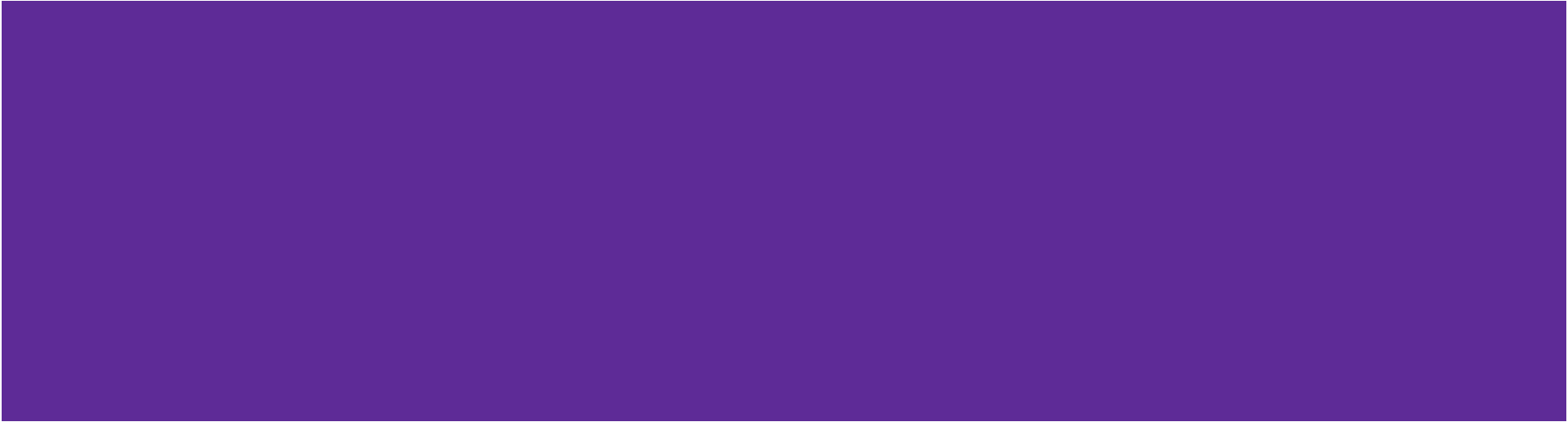
The Broader Goals

- Community
- Active citizenship
- Work closely with [Consortium of Cybersecurity Clinics](#)
- Build social capital
- *Community security is national security*



Photo: Consortium of Cybersecurity Clinics dinner in Las Vegas / DEF CON (August 2025)

For more details or expressing interest in participation, send email to
cyberclinic@tufts.edu



Supporting Material



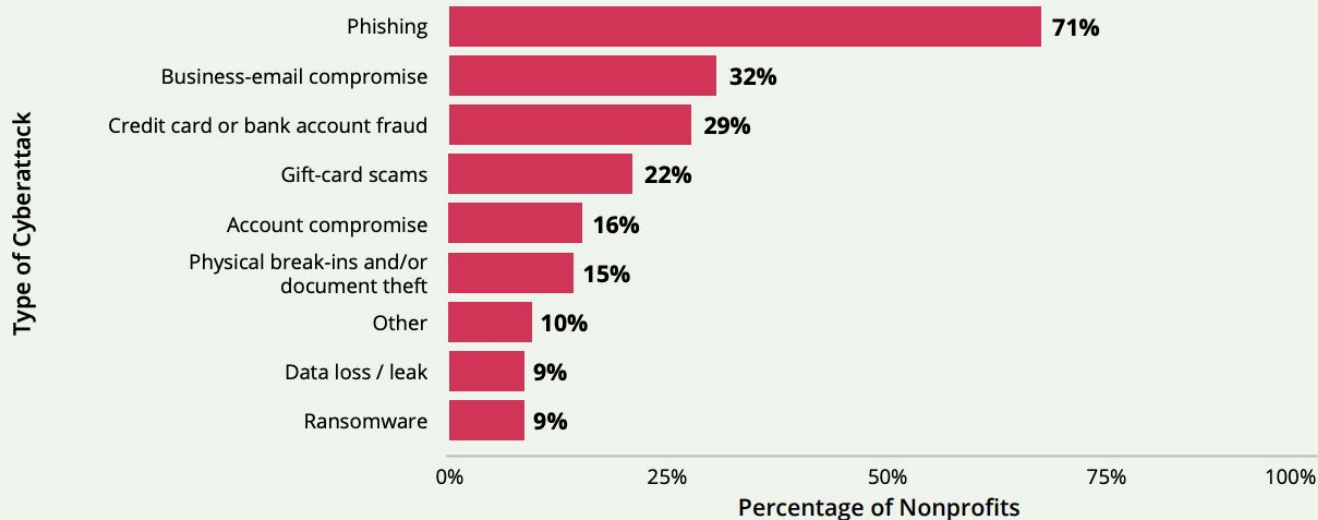
Why Nonprofit Organizations Need to Care About Cybersecurity?

- Cybersecurity is often the last thing organizations think about...
- ...until an incident happens (i.e., reactive)...
- ...and it's now a matter of *when* an incident happens, not *if*...
- ...and then it gets very expensive
 - Bad publicity
 - Data breach => need to report to Commonwealth of Massachusetts, donors, clients, public
 - Potential loss of operations
 - Remediation and cleanup
 - 🙌 \$100K+ bill
- Doesn't matter how big or small organization is, there are no boundaries

Threats to Nonprofits

Figure 1: Cyberattacks Experienced by Nonprofits

[68 Responses in Total]



Source: Center for Long Term Security (CLTC) at University of California, Berkeley [1]

Constraints for Nonprofit Organizations

- Money
- Staffing and high turnover
- Knowledge
- Time / convenience
- (Outdated) infrastructure

Key Findings from CLTC [1]

Key findings include:

- ▶ **1. Nonprofits are frequent targets of cybercrime,** with 85% of nonprofits surveyed reporting that they have experienced at least one cyber attack. **Nonprofits remain attractive for cyber criminals because they collect and store sensitive information;** 75% of surveyed nonprofits reported that they collect social security numbers.
- ▶ **2. Nonprofits lack the staff they need to protect themselves against cyber attacks:** 53% of surveyed nonprofits have no full-time IT staff, and those that do have an average of just one full-time IT staff member for every 96 employees.
- ▶ **3. Nonprofits have moderate adoption rates of basic cybersecurity controls.** While 61% of surveyed nonprofits employ multi-factor authentication (MFA) for email and collaboration tools, 16% do not use MFA at all, and 53% do not offer any type of cybersecurity awareness training for employees.
- ▶ **4. Nonprofits struggle most with funding and prioritizing cybersecurity:** 46% of surveyed nonprofits ranked funding as their greatest obstacle to improving their organization's cybersecurity, followed closely by a lack of knowledge on what to improve and difficulty prioritizing cybersecurity over competing objectives.
- ▶ **5. Nonprofits want hands-on, human assistance to improve their cybersecurity.** Nonprofits ranked a city help line and proactive cybersecurity consulting as the highest priority needs for improving their cybersecurity. These items ranked above other cybersecurity resources, such as tools and software, educational websites, and awareness training, emphasizing the necessity of human interaction in cybersecurity resilience.

Acknowledgements

Special thanks to Sarah Powazek, the Consortium of Cybersecurity Clinics, and the Center for Long Term Cybersecurity (CLTC) for their works, and most importantly, leadership working with non-profit organizations, governments, and small businesses.

Usable References

1. https://cltc.berkeley.edu/wp-content/uploads/2024/11/CyberCAN_Cybersecurity-for-Cities-and-Nonprofits.pdf
2. https://www.cisa.gov/sites/default/files/2024-05/joint-guide-mitigating-cyber-threats-with-limited-resources-guidance-for-civil-society-508c_3.pdf
3. https://www.reddit.com/r/sysadmin/comments/ln8u6g/affordable_or_free_password_manager_for_nonprofits/