Sam G. Havron

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RESEARCH Interests I study computer security and privacy problems in the context of intimate partner violence (https://ipvtechresearch.org). Interests include human-centered security, digital safety, and privacy, especially in the context of marginalized and vulnerable communities.

EDUCATION

Cornell University

Ph.D. and M.S., Computer Science In residence at Cornell Tech, NYC.

August 2017 - present

New York, NY

Advisors: Thomas Ristenpart and Nicola Dell.

University of Virginia

B.S., Computer Science

Charlottesville, VA August 2014 - May 2017

ACADEMIC AWARDS

• Best Paper Honorable Mention for [1] at ACM CSCW.

November 2019

- Cornell Graduate School Fellowship. Approximately 20% of Cornell doctoral students receive this fellowship.
- Louis T. Rader Award for Outstanding Undergraduate Education at the University of Virginia.

May 2017

August 2017

Publications

- [1] "Is my phone hacked?" Analyzing Clinical Computer Security Interventions with Survivors of Intimate Partner Violence. Diana Freed*, <u>Sam Havron</u>*, Rahul Chatterjee, Emily Tseng, Andrea Gallardo, Thomas Ristenpart, Nicola Dell. *ACM CSCW*, 2019. Best Paper Honorable Mention Award. *co-equal first authors.
- [2] Clinical Computer Security for Victims of Intimate Partner Violence. <u>Sam Havron</u>*, Diana Freed*, Rahul Chatterjee, Damon McCoy, Nicola Dell, Thomas Ristenpart. *28th USENIX Security Symposium*, *2019*. *co-equal first authors.
- [3] The Spyware Used in Intimate Partner Violence. Rahul Chatterjee, Periwinkle Doerfler, Hadas Orgad, Sam Havron, Jackeline Palmer, Diana Freed, Karen Levy, Nicola Dell, Damon McCoy, Thomas Ristenpart. 39th IEEE Symposium on Security and Privacy 2018.
- [4] Poster: Secure Multi-Party Computation as a Tool for Privacy-Preserving Data Analysis. Sam Havron, David Evans. 37th IEEE Symposium on Security and Privacy 2016.

Presentations

- Lawyers Committee Against Domestic Violence (LCADV), New York, NY, "Clinical Computer Security for Victims of Intimate Partner Violence" September 12th, 2019
- 28th USENIX Security Symposium, Santa Clara, CA, "Clinical Computer Security for Victims of Intimate Partner Violence" August 14th, 2019
- Empire Hacking, New York, NY, "Clinical Computer Security for Victims of Intimate Partner Violence" June 11th, 2019
 - "This was one of the best-reviewed talks of any recent @EmpireHacking," Dan Guido (CEO, Trail of Bits) https://twitter.com/dguido/status/1178734756747468800
- Bronx Legal Services, The Bronx, NY, "Clinical Computer Security for Victims of Intimate Partner Violence" June 4th, 2019

RESEARCH IMPACT

- Led direct interventions to help over 101 victims (to-date) of intimate partner violence navigate technology abuse [2].
- Based on our study [3], Google stopped serving advertisements on search terms relating to intimate partner violence and increased enforcement of Play Store policies.

SELECT PRESS COVERAGE

Titles are clickable. Full list is available at: https://havron.dev/media

- "NYC Has Hired Hackers to Hit Back at Stalkerware," MIT Technology Review (August 14, 2019)
- "New Tools Help Detect Digital Domestic Abuse," Cornell Chronicle (August 13, 2019)
- "How 'Stalkerware' Apps are Letting Abusive Partners Spy on Their Victims," MIT Technology Review (July 10, 2019)
- "The Simple Way Apple and Google Let Domestic Abusers Stalk Victims," WIRED (July 2,
- "Tech Can Impact Domestic Violence Not Always in a Positive Way," Smart Cities Dive (May 30, 2019)
- "Hacker Eva Galperin Has a Plan to Eradicate Stalkerware," WIRED (April 3, 2019)
- "Hundreds of Apps Can Empower Stalkers to Track Their Victims," The New York Times (May 19, 2018)

Teaching EXPERIENCE

• Graduate Teaching Assistant, Cornell CS 5435 Computer Security and Privacy in the Wild (by Prof. Ari Juels) Fall 2018

- Undergraduate Teaching Assistant, UVA CS 2150
- Data Structures and C++ (by Prof. Aaron Bloomfield) • Undergraduate Teaching Assistant, UVA CS/ECE 2330 Fall 2015 - Fall 2016 Digital Logic Design (by Prof. Joanne Dugan)

COMMUNITY SERVICE

DEPARTMENT AND • Instructor - Expanding Your Horizons (EYH) Taught middle school girls from at-risk communities about computer programming, e.g., using paper airplanes as an analogy for TCP/IP protocols. 500+ girls attend EYH. Ithaca, NY April 2018

- Contest Judge UVA High School Programming Contest Helped create coding problems and run the largest programming competition for high school students in the mid-Atlantic region of the U.S.
- Charlottesville, VA Spring 2015 - Spring 2017

Spring 2016 - Spring 2017

- Board member of PhD student association at Cornell Tech (PACT). New York, NY, August 2018 - present
- Secretary of Cornell Computer Science Graduate Organization (CSGO). Ithaca, NY, August 2017 - May 2018

Relevant Courses Taken

Security & Privacy Technologies (CS 6431) Advanced Algorithms (CS 6820) Advanced Programming Languages (CS 6110) Applied Machine Learning (CS 5785) Designing Secure Cryptography (CS 6831)

SKILLS

- Select pinned GitHub repositories: https://github.com/havron
 - havron/daas: Marketplace app implemented with tiered Docker microservices, including search and recommendation engines, load balancing, CI staging & deployment, and more.
 - stopipy/isdi: Non-invasive spyware and stalkerware scanning tool for iOS and Android.
- Programmming Languages:
 - Standard proficiency: Python, Java, C++
 - Cursory proficiency: OCaml, C, JavaScript, SQL
- Technologies/frameworks:
 - Systems: Bash scripting, Linux, Git, Vim
 - Data Analysis: Jupyter Notebooks, scikit-learn, pandas
 - Modern Web Development: Docker, Django, Travis CI, Flask, AWS (EC2, S3, DynamoDB, λ , etc), Hugo static web compiler
 - Technical Writing: LATEX, Overleaf

References

- Nicola Dell, Assistant Professor, Jacobs Technion-Cornell Institute, Cornell University
- Thomas Ristenpart, Associate Professor, Cornell Tech, Cornell University