Sam Havron

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Research Interests

Computer security and privacy: human-centered security, digital safety, and privacy, especially in the context of marginalized and highly vulnerable communities.

Education

Cornell University New York, NY
   Ph.D. and M.S. in Computer Science August 2017 - present
   In residence at Cornell Tech (NYC)
   Advisors: Thomas Ristenpart and Nicola Dell.

University of Virginia Charlottesville, VA
   B.S. in Computer Science August 2014 - May 2017

Awards

- Facebook Fellowship Program Finalist 2020
  - **Top 4% of Applicants (1800+ applied)**
- NortonLifeLock Graduate Research Fellowship Finalist 2020
  - **Current finalist, under consideration to win**
- Advocate of New York City Award. 2019
- Best Paper Honorable Mention for [P3] at ACM CSCW. November 2019
- Cornell Graduate School Fellowship. Top 20% of Cornell August 2017
  doctoral students receive this fellowship.
- Louis T. Rader Award for Outstanding Undergraduate Education May 2017
  at the University of Virginia.

Impact in Practice

- Led direct interventions to help over 120 victims (to-date) of intimate partner violence navigate technology abuse [P2].
- Based on our study [P1], Google stopped serving advertisements on search terms relating to intimate partner violence and increased enforcement of Play Store policies.

Publications

[P3] Diana Freed*, **Sam Havron***, Rahul Chatterjee, Emily Tseng, Andrea Gallardo, Thomas Ristenpart, Nicola Dell. "Is my phone hacked?" Analyzing Clinical Computer Security Interventions with Survivors of Intimate Partner Violence. Proceedings of the ACM on Human-Computer Interaction: Vol. 3, Issue CSCW, Article 202 (2019) (**ACM CSCW**).
Best Paper Honorable Mention Award. *co-equal first authors.

[P2] **Sam Havron***, Diana Freed*, Rahul Chatterjee, Damon McCoy, Nicola Dell, Thomas Ristenpart. Clinical Computer Security for Victims of Intimate Partner Violence. 28th USENIX Security Symposium, 2019 (**USENIX Security**). *co-equal first authors.

[P1] Rahul Chatterjee, Periwinkle Doerfler, Hadas Orgad, **Sam Havron**, Jackeline Palmer, Diana Freed, Karen Levy, Nicola Dell, Damon McCoy, Thomas Ristenpart. The Spyware Used in Intimate Partner Violence. 39th IEEE Symposium on Security and Privacy 2018 (**IEEE S&P**).

Posters

[PS1] **Sam Havron**, David Evans. Poster: Secure Multi-Party Computation as a Tool for Privacy-Preserving Data Analysis. 37th IEEE Symposium on Security and Privacy 2016 (**IEEE S&P**).

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

Select Media Coverage

Titles are clickable. Full list is available at: https://havron.dev/press
My work has been covered by outlets including ***The New York Times, WIRED, NPR (WBUR),*** and ***MIT Technology Review***. Notable people mentioning my work include **U.S. Senator Kamala Harris (D-CA)**.

- "For domestic violence victims, cyberstalking is a growing issue. This NYC clinic is helping them." *Brooklyn Daily Eagle* (December 2, 2019)
- U.S. Senator Kamala Harris (D-CA) tweeted about an NPR (WBUR) podcast featuring our team (podcast published November 27, 2019)
- "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, 2019)
- "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   Fall 2018
  Computer Security and Privacy in the Wild (by Prof. Ari Juels)
- **Undergraduate Teaching Assistant**, UVA CS 2150   Spring 2016 - Spring 2017
  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)

Department and Community Service

- **Technology Consultant** - Computer Security Clinic for IPV Survivors   New York, NY
  Helped lead a computer security clinic for over 120 IPV survivors to-date.   November 2018 - present

- **Research Mentor** - Women in Technology and Entrepreneurship   New York, NY
  in New York (WiTNY). Mentored 2 undergraduate research interns.   Summer 2019 - present

- **Peer Mentor** - Cornell Tech PhD Peer Mentorship Program   New York, NY
  Mentored one junior CS PhD student.   December 2019 - present

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

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

- **Social Chair** of PhD student association at Cornell Tech (PACT).   New York, NY, December 2019 - 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.
  - stopipv/isdi: Non-invasive spyware and stalkerware scanning tool for iOS and Android.
- Programmming Languages:
  - Standard proficiency: Python, Java, C++
  - Cursory proficiency: OCaml, C, JavaScript, Rust, 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, Information Science, Cornell Tech, Cornell University

- Thomas Ristenpart, Associate Professor, Computer Science, Cornell Tech, Cornell University