Hieu Le

Contact Info

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Research Interests

Summary Privacy, Ads & Tracking Ecosystems, Filter Rule Generation, Network Measurements

Education

Fall 2018 – ongoing
Doctor of Philosophy, *UC Irvine*.
Electrical Engineering and Computer Science (EECS)
- Advisor: Athina Markopoulou
- Expected Graduation: June 2023

2021
Master of Science in Computer Engineering, *UC Irvine*, GPA–3.96/4.0.
- Advisor: Athina Markopoulou
- Thesis: Characterizing the Fire TV Advertising and Tracking Ecosystem

2009
Bachelor of Computer Science and Engineering, *UC Irvine*, GPA–3.6/4.0.
Campuswide Honors Program – Undergrad research on watershed extraction.
- Undergrad Advisor: David Eppstein
- Senior Research Report: Watershed Extractions

Publications

4 **H. Le**, S. Elmalaki, A. Markopoulou, Z. Shafiq, "AutoFR: Automated Filter Rule Generation for Adblocking," *To appear in the Proceedings of the 32nd USENIX Conference on Security Symposium*, August 2023, preprint arXiv:2202.12872.

3 R. Trimananda, **H. Le**, H. Cui, J. Ho, A. Shuba, A. Markopoulou, "OVRseen: Auditing Network Traffic and Privacy Policies in Oculus VR," *Proceedings of the 31st USENIX Conference on Security Symposium*. August 2022.
- Presented by R. Trimananda at PrivacyCon 2022 (1:46:52), and Duck Duck Go.

2 **H. Le**, A. Markopoulou, Z Shafiq, "CV-INSPECTOR: Towards Automating Detection of Adblock Circumvention," *Proceedings of Network and Distributed System Security Symposium 2021*.

1   J. Varmarken†, **H. Le**†, A. Shuba, A. Markopoulou, Z. Shafiq, "The TV is Smart and Full of Trackers: Measuring Smart TV Advertising & Tracking," *in Proceedings of Privacy Enhancing Technologies Symposium (PETS/PoPETS) 2020*, Issue 2, pp. 129-154, May 2020. (†: co-first authors)

o   Presented by J. Varmarken at PrivacyCon 2021 (15:50), and to Consumer Reports and Duck Duck Go.

*   Anastasia Shuba, Evita Bakopoulou, Milad Asgari Mehrabadi, **Hieu Le**, David Choffnes, Athina Markopoulou, "AntShield: On-Device Detection of Personal Information Exposure," arXiv:1803.01261.

Work Experience

Sept. 2018 – Present	**Graduate Student Researcher**, *UC Irvine*. My research focuses on the cat-and-mouse game between publishers & advertisers vs. adblockers. My work aims to facilitate the adblocking community by automating bottlenecks in the generation of filter rules.
June 2021 – Sept. 2021	**Automation Engineer Intern**, *eyeo*. Worked with the Anti-CV team to deal with ad-circumvention by customizing CV-Inspector to detect when sites circumvent adblockers.
Aug. 2017 – June 2020	**Senior Software Developer**, *Internet Brands*, El Segundo, CA. Architect technical solutions for new features for websites, integrate with third-party partners, and plan production deployments for high traffic sites.
Aug. 2016 – May 2018	**Technical Consultant**, *with Prof. Markopoulou's group*, UC Irvine, Calit2. Software development for the AntMonitor project (`https://athinagroup.eng.uci.edu/projects/antmonitor/`): Android UI design, automated APK collection, contributing to research paper (TR1).
Aug. 2013 – Aug. 2017	**Lead Software Developer**, *Metronome Software*, Laguna Hills, CA. Lead in software development for multiple projects funding by government contracts, related to web development.
April 2011 – Aug. 2013	**Software Developer**, *Metronome Software*, Laguna Hills, CA. Involved in web development of multiple projects funded by government contracts.
July 2009 – April 2011	**Software Developer**, *InQuira (Oracle)*, Torrance, CA. Development of Adobe Flex applications.

Invited Talks

Oct. 2022	"AutoFR: Automated Filter Rule Generation for Adblocking", Ad-Filtering Dev Summit 2022, Amsterdam, Netherlands.
Oct. 2021	"Towards Automatic Generating and Testing of Filter Rules", Adblocker Dev Summit 2021, Virtual.
Oct. 2020	"Revisiting Adblock Circumvention", Adblocker Dev Summit 2020, Virtual.
Sept. 2019	"Measuring and Mitigating Adblock Circumvention in the Wild", Adblocker Dev Summit 2019, Amsterdam, Netherlands.

Service & Outreach

2022-present	Nothing to Hide? A Data Privacy Podcast. This initiative aims to raise awareness of privacy issues to a general audience and is led by PhD students and postdocs across multiple institutions within the ProperData NSF Frontier project.
2022-present	Elected Officer of Society of Graduate Electrical Engineers & Computer Scientist.
2022-2023	USENIX Security Artifact Reviewer.
2022-2023	PoPETs Artifact Reviewer.
Nov. 2022	Contributed to FTC Request for Comments on Commercial Surveillance and Data Security. Submitted by Northeastern's Institute on Cybersecurity and Privacy.
June 2022	Graduate Students Panel for Privacy and IoT Research Exploration Workshop 2. Hosted by the ProperData NSF Frontier.

Awards & Honors

2018	UCI EECS Department Fellowship Award
2009	UCI Campuswide Honors Program

Skills

Languages	Python, HTML, CSS, JavaScript, Java
Tools	Selenium, scikit-learn, Chrome Extensions, AWS EC2, Docker
OS	Mac OS, Ubuntu, Android