

Christina Yeung

Privacy | Security | Web measurement | Algorithmic fairness

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Education

Sep 2021 – Present	University of Washington, Paul G. Allen School of Computer Science & Engineering <i>Ph.D in Computer Science & Engineering</i> Advisors: Franziska Roesner and Tadayoshi Kohno
Sep 2008 – May 2012	Bates College <i>B.A. in Economics</i>

Publications

The Web Conference 2023	Online Advertising in Ukraine and Russia During the 2022 Russian Invasion Christina Yeung , Umar Iqbal, Yekaterina Tsipenyuk O'Neil, Tadayoshi Kohno, Franziska Roesner <i>The Web Conference 2023, Austin TX, 2023</i>
ConPro 2021	Bad Job: Abusive Work on Alternative Microtask Platforms Christina Yeung , Daniel Salsburg, Joseph A. Calandrino <i>Workshop on Technology and Consumer Protection (ConPro), Online, 2021</i>
eCrime 2020	Checkout Checkup: Misuse of Payment Data from Web Skimming Phoebe Rouge, Christina Yeung , Daniel Salsburg, Joseph A. Calandrino <i>Symposium on Electronic Crime Research (eCrime), Online, 2020</i>
WAY 2020	Secondary Education: Measuring Secondary Uses of 2FA Phone Numbers Min Hee Kim, Christina Yeung , Daniel Salsburg, Joseph A. Calandrino <i>Who Are You?! Adventures in Authentication Workshop (WAY), Online, 2020</i>
PETS 2017	Cross-Device Tracking: Measurement and Disclosures Justin Brookman, Phoebe Rouge, Aaron Alva, Christina Yeung <i>Proceedings of the Privacy Enhancing Technologies Symposium (PETS), Minneapolis, 2017</i>

Research Experience

Sep 2021 - Present	University of Washington <i>Testing for Gender Bias in Machine Learning Based Speech Emotion Recognition</i> <ul style="list-style-type: none">• Evaluating a wearable device that reports users' emotions based on their tone of voice to see if it describes masculine and feminine voices differently• Developing a quantitative user study to understand whether implemented models perpetuate societal stereotypes• Built a framework to automate interactions with the wearable device and enable testing inputs (e.g., different audio clips) at scale <i>Analyzing the Advertising Ecosystem in Ukraine and Russia</i> <ul style="list-style-type: none">• Conducted web measurements to collect advertisements in Ukraine, Russia, and the US for five months of the 2022 Russian invasion of Ukraine• Analyzed network requests to discover which advertising platforms served content in each country, and measured their advertising trends• Implemented a mixed approach of unsupervised topic modeling and qualitative coding to identify and characterize conflict-related advertisements• Submitted for review at the 2023 ACM Web Conference
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Jan 2017 - July 2021

Federal Trade Commission, Bureau of Consumer Protection

Measuring Abuse on Microtask Platforms

- Explored the ecosystem of available work on 3 microtask platforms
- Developed the methodology used to quantify the available tasks, and used qualitative methods to categorize their overall characteristics
- Presented findings to a virtual audience at the Workshop on Technology and Consumer Protection in 2021

Tracking Online Misuse of Credentials

- Investigated the behaviors of digital criminals who leverage web skimming attacks to steal payment credentials from vulnerable websites
- Designed the process for creating and tracking realistic honey tokens, allowing us to quantitatively analyze unauthorized purchases and attempts to access accounts
- Conducted a preliminary study that mimicked a publicly leaked data breach to benchmark how thieves misuse credentials

Work Experience

Jan 2017 - July 2021

Federal Trade Commission, Bureau of Consumer Protection

Technologist in the Office of Technology, Research, and Investigation

- Inspected web traffic with mitmproxy, leading to the agency's first settlement with a mobile advertising network for deceptive data collection practices (InMobi Pte Ltd.)
- Scraped websites with Python and preserved evidence, leading to successful cases against companies that offered fraudulent free trials (Apex Capital Group, LLC and Transact Pro)
- Developed custom tools to capture key evidence for cases that found insufficient disclosures for in-app purchases (Amazon)

Invited Talks

May 2017

Federal Trade Commission

Public workshop, Identity Theft: Planning for the Future

Presented findings from a study that analyzed thieves' misuse of credentials posted to public sites.

Oct 2016

Federal Trade Commission

Public workshop, FinTech Series: Crowdfunding & Peer-to-Peer Payments

Presented results from a survey of 20 crowdfunding platforms' online practices, such as disclosures, and ease of remediation.

Skills

Languages | Python, Java, JavaScript, HTML, SQL

Tools & Techniques | \LaTeX