Maaz Bin Musa

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Education

2019–Curr **University of Iowa PhD**,
Computer Science GPA – 3.86.

2013–2017 **NUCES-FAST Bachelor of Science**,
Computer Science GPA – 3.48.

Experience

Aug 2019 – Curr **Research Assistant**, UNIVERSITY OF IOWA.
- Develop frameworks for **auditing privacy and compliance online**. This includes studying an organizations data collecting and sharing practices. Additionally, we measure the compliance practices of these organizations to check if user rights are upheld or not.

May 2022 – Aug 2022 **Research Intern**, ICSI - BERKELEY.
- Worked on first-party tracking prevalence. Post third-party depreciation, we wanted to analyze how publishers and advertisers are colluding to use **first-party cookies to perform tracking**.

Aug 2018 – Aug 2019 **Research Assistant**, TPI LAB - LUMS.
- Worked on internet measurement with a focus on auditing data flows online. Created and deployed **honeypots for online malicious / tracking entities.** Built pipelines using selenium and python to leak personal identifiers and monitor how they were used / misused.

Publications

June 2023 **Forms of Disclosure: The Path to Automated Data Privacy Audits [Paper Link]**.
- Mihailis Diamantis, **Maaz Bin Musa**, Lucas Ausberger and Rishab Nithyanand
- Measuring CCPA compliance of 400 data brokers registered with the Attorney Generals Office
- Published in Harvard Journal of Law and Technology (Forthcoming), 2023

July 2022 **ATOM: Ad-Network Tomography [Paper Link]**.
- **Maaz Bin Musa** and Rishab Nithyanand
- Uncover undisclosed relationships between trackers and advertisers with 100% accuracy
- Use ad personalization as a vantage point for server side relationships
- Published in Privacy Enhancing Technologies Symposium (PETS) 2022
- **Runner-up for the Andreas Pfitzmann best student paper award**

June 2022 **Act or React [Paper Link]**.
- Hussam Habib, **Maaz Bin Musa**, Fareed Zaffar and Rishab Nithyanand
- Quantifying behavior of problematic reddit communities using content and user features
- Predicting which communities get banned 6 months ahead of time
- Published in International Conference on Web and Social Media (ICWSM) 2022

July 2020 **CanaryTrap [Paper Link]**.
- Shehroze Farooqi, **Maaz Bin Musa**, Zubair Shafiq and Fareed Zaffar
- Developed a matrix based scalable honeytrap to uncover server side data sharing
- Caught 16 entities misusing user data for ransomware and personalized advertisement
- Published in Privacy Enhancing Technologies Symposium (PETS) 2020

Research Projects

June 2023 **Optimizing privacy policy compliance analysis**.
- Identifying impactful phases of compliance measurement
- Exploring obstacles and opportunities in compliance analysis using privacy policies

June 2023 **Privacy policy dataset for the CCPA**.
- Create first of its kind taxonomy of CCPA mandates
- Collect domain expert annotations of responses to CCPA mandates from privacy policies

Talks & Presentations

Nov 2023   **Graduate research symposium UIowa [Link]**.
- Empowering Transparency and Accountability in Online Privacy

Sep 2023   **Society of Privacy, Law and Technology** .
- Privacy hygiene for beginners
- How to mitigate privacy invasion for layman

Oct 2022   **DataSkeptic AD-Tech Series [Link]**.
- Discussed my paper Ad-network Tomography and how it increases transparency

Jul 2022   **Privacy Enhancing Technology 2022 [Link]**.
- Presented my work Ad-Network Tomography in PETS conference

Awards & Honors

Nov 2023   **3MT UIowa Finalist**.
- Present my research in privacy and compliance in 3 minutes
- Final round pending

Aug 2022   **PETS'22 travel grant**.

Skills & Interests

Internet Measurements: Privacy, Tech Audits, Privacy risk assesment, OpenWPM, Label-Studio, Online Trackers and Advertisers

User Data Rights: CCPA, GDPR, compliance

Machine Learning: Statistics, XAI, LIME

Natural Language Processing: Data Wrangling, NLU, LLM's, BERT, Finetuning, T5

Coding Languages: Python, Javascript