Maaz Bin Musa

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Education

University of Iowa **Aug. 2019 – June 2024**

PhD in Computer Science *Iowa City, Iowa*

Experience

Research Assistant **Aug 2019 – Present**

SPARTA Lab in University of Iowa *Iowa City, Iowa*

- Design frameworks for **auditing privacy and compliance online using NLP and ML**
- Develop tools for analyzing online businesses data collecting and sharing practices
- Measure the compliance practices of these businesses to determine if user rights are upheld or not. Our preliminary results suggest businesses that consume egregious amounts of user data, often do not provide basic privacy rights to users.

Research Intern **May 2022 – Aug 2022**

ICSI Lab *Berkeley, California*

- Lead an investigation on first-party tracking prevalence Post third-party depreciation
- Quantified collusion between publishers and advertisers facilitated via **first-party cookies**

Research Assistant **Aug 2018 – Aug 2019**

TPI Lab in LUMS *Lahore, Pakistan*

- Collaborated on internet measurement projects with a focus on auditing data flows online
- Created and deployed **honeypots for online malicious / tracking entities** using Selenium and OpenWPM
- Built automation pipelines using python to leak personal identifiers and monitor how they were used / misused

Selected Publications

Forms of Disclosure | *The Path to Automated Data Privacy Audits* **June 2023**

- Evaluated CCPA compliance of 400 data brokers using Natural Language Processing toolkit
- Fine-tuned an LLM to build and predict CCPA related text in privacy policies
- Published in Harvard Journal of Law and Technology

ATOM | *Ad-Network Tomography* **July 2022**

- Uncovered undisclosed relationships between trackers and advertisers with 100% accuracy
- Converted ad content to quantifiable vectors using NLP
- Leveraged ad personalization as a vantage point for uncovering server side relationships.
- Published in Privacy Enhancing Technologies Symposium (PETS) 2022
- **Runner-up for the Andreas Pfitzmann best student paper award**

CanaryTrap | *Detecting Data Misuse by Third-Party Apps on Online Social Networks* **July 2020**

- Designed 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

Talks and Presentations

Privacy Hygiene | *Society of Privacy, Law and Technology* **Sep 2023**

- Taught a graduate level class surrounding basic online privacy hygiene

Graduate Research Symposium | *Empowering Transparency & Accountability in the online world* **Nov 2023**

- Presented my PhD research to incoming graduate students

DataSkeptic | *Ad-tech series* **Jul 2022**

- Discussed the impact and consequences of my paper ATOM on a podcast series on Advertising technology and privacy

Awards & Honors

3MT 2023 | *Peoples choice award* **Nov 2023**

- Successfully presented my research work to general audience under 3 minutes

Travel grant | *PoPETs* **Aug 2022**

- Awarded $1500 travel grant to attend PET's 2022 in Australia

Research Projects

SoK | *Optimizing privacy policy compliance analysis* **Present**

- Exploring obstacles and opportunities in compliance analysis using privacy policies
- Identifying impactful phases of compliance measurement

CPP Dataset | *Privacy policy dataset for CCPA* **Present**

- Interpret CCPA requirement mandates
- Analyze CCPA mandates extracted from privacy policies by domain experts

Relevant Coursework

- Online Advertising and Tracking
- Privacy and Anonymity
- Web Mining
- Privacy, Law and Technology
- Design and Analysis of Algorithms
- Information Retrieval
- Data structures
- Object Oriented Programming