

Yash Vekaria

Research Interests

Cybersecurity & Web Privacy; Digital Advertising Ecosystem; Ad-fraud; Ad-targeting; Large-scale Internet Measurements; Web Tracking; Online Misinformation; Applied Machine Learning.

Education

- 2021–Present **Ph.D. in Computer Science** 3.95/4.00
University of California, Davis
- 2016–20 **B.Tech. in Computer Science** 9.04/10.00
The LNM Institute of Information Technology (LNMIIT), India.

Publications

- IEEE S&P 2024 **The Inventory is Dark and Full of Misinformation: Understanding the Abuse of Ad Inventory Pooling in the Ad-Tech Supply Chain**
Yash Vekaria, Rishab Nithyanand, Zubair Shafiq
Accepted at IEEE Symposium on Security & Privacy (Oakland), 2024
Acceptance rate: 21.3% (49/230)
- 2023 **Auditing the Compliance of Twitter's Advertising Policies and Effect on Platform's Advertising during Musk's Acquisition**
Yash Vekaria, Zubair Shafiq, Savvas Zannettou
Under Submission, 2023
- WebSci 2021 **Differential Tracking Across Topical Webpages of Indian News Media**
Yash Vekaria*, Vibhor Agarwal*, Pushkal Agarwal, Sangeeta Mahapatra, Sakthi Balan Muthiah, Nishanth Sastry, Nicolas Kourtellis (**first co-authors*)
13th ACM Web Science Conference, 2021
- ICWSM 2021 **Under the Spotlight: Web Tracking in Indian Partisan News Websites**
Vibhor Agarwal*, **Yash Vekaria***, Pushkal Agarwal, Sangeeta Mahapatra, Sakthi Balan Muthiah, Nishanth Sastry, Nicolas Kourtellis (**first co-authors*)
15th International AAAI Conference on Web and Social Media (ICWSM), 2021
Acceptance rate: 22.4% (30/134)
- RCIS 2021 **A Metadata-based Event Detection Method using Temporal Herding Factor and Social Synchrony on Twitter Data**
Nirmal Kumar Sivaraman, Vibhor Agarwal, **Yash Vekaria**, Sakthi Balan Muthiah
15th International Conference on Research Challenges in Information Science (RCIS), 2021
- SocInfo 2019 **Poster Invitation: Event Detection in Twitter**
Nirmal Kumar Sivaraman, Vibhor Agarwal, **Yash Vekaria**, Sakthi Balan Muthiah
11th International Conference on Social Informatics (SocInfo), 2019

Experiences

- Sep 2021 – **University of California, Davis** **Davis, USA**
Present *Research Assistant, Breakerspace Lab,*
Advisor: Prof. Zubair Shafiq
Research focus is towards investigating and improving security, privacy, and transparency issues in the online advertising ecosystem through internet measurements.
- Summer 2022 **Max Planck Institute für Informatik** **Saarbrücken, Germany**
Visiting Research Fellow, Internet Architecture Group (INET),
Advisor: Prof. Savvas Zannettou
Research project aimed at detecting and studying the problematic advertising on Twitter to understand the compliance and violations of its advertising policies, problematic advertiser practices and effectiveness of Twitter's moderation strategies during the hierarchy change.
- Jan 2020 – **Innovaccer** **Noida, India**
Aug 2021 *Data Scientist*
 - Worked on *healthcare data analytics*, dashboard building, and data insights' generation for 2 USA clientele ACO projects: *Orlando Health* (Florida) and *Dignity Health* (California).
 - Performed *sentiment analysis* on Yelp reviews to understand customer pain points.
 - Carried out *statistical data analysis* for reducing unnecessary Imaging on patients.
 - Built numerous *automations* to reduce manual human efforts for example a tool to convert measure definition JSON files to SQL queries.
 - Developed a LinkedIn-based network tool for the marketing team to generate effective leads by leveraging network information.
- Summer 2019 **Innovaccer** **Noida, India**
Decision Science Intern
 - *Optimized* Innovaccer's data model by improving PostgreSQL queries, thereby reducing the overall execution time from 10 hours to 3 hours.
 - Performed patient revisit prediction using *Classification and Regression Tree* (CART) based model.
 - Scripted *automated* tree-based visualization of enormous measure definition JSON files using *NetworkX* Python library.

Teaching

- Spring 2022 **Computer Networks (ECS 152A)** *Teaching Assistant*
University of California, Davis, USA
- Spring 2019 **Data Structures & Algorithms** *Teaching Assistant*
The LNM Institute of Information Technology, India
- Fall 2018 **Computer Organization & Architecture** *Teaching Assistant*
The LNM Institute of Information Technology, India
- Fall 2017 **Computer Programming** *Teaching Assistant*
The LNM Institute of Information Technology, India

Skills

- General *Network Measurements, Computational Social Science, Data Science, Data Analytics, Data Visualization, Machine Learning, Data & Text Processing, Natural Language Processing, Image Processing, Web Crawling*
- Languages *Python, C, Basic C++, Python Libraries (Pandas, Numpy, Matplotlib, Scipy, OpenCV, Selenium, BeautifulSoup, Multiprocessing), SQL/PostgreSQL*
- Tools *Docker, Git/GitHub, LaTeX*

Leadership

- Spring 2023 **E-PRIME Mentor** *UC Davis*
Mentored an undergraduate student on a research project as part of the E-PRIME (Education Partnership in Research, Inclusion and Mentoring Experiences) Mentorship Program.

Honors & Awards

- 2023 **Cybersecurity Summer Fellow** *Georgia Tech, USA*
One of the 20 fellows selected from a pool of hundreds of applicants across the globe.
- 2016–2018 **Merit Scholarships** *The LNM Institute of Information Technology, India*
Awarded to Top 5% students with GPA greater than 9.
- 2019, 2021 **Spot Awards** *Innovaccer, India*
Two Quarterly Spot Awards received: One for efficient optimization of data model from 10 hrs to 3 hrs. Second for automating the process of running measures.

Services

- 2024 **Artefact Evaluation Committee Member**
Privacy Enhancing Technologies Symposium (PETS)
- 2023 **Program Committee Member**
ACM Workshop on Artificial Intelligence and Security (AISec)
ACM Conference on Fairness, Accountability, and Transparency (FAccT)
ACM Web Science Conference (WebSci)
IEEE Conference on Sensing, Communication, and Networking (SECON)
- 2023 **Artefact Evaluation Committee Member**
IEEE Workshop on Offensive Technologies (WOOT)

Travel Grants

- 2023 *ACM SIGMETRICS*
- 2022 *PETS, ACM WiSec*
- 2021 *IEEE S&P (Oakland) (Virtual), IEEE CSF (Virtual)*

Invited Talks

- May 2023 **Be Aware: Dark Pooling Uncovered**
AdExchanger's Programmatic I/O, MGM Las Vegas
- Jul 2021 **Differential Tracking Across Topical Webpages of Indian News Media**
CMLBDA, The LNM Institute of Information Technology, India

Media Coverage

- Mar 2021 **Tracking the Trackers (Open – The Magazine)** *Ullek NP, [\[Link\]](#)*

References

Prof. Zubair Shafiq

Associate Professor, University of California, Davis
Email: zshafiq@ucdavis.edu
Webpage: <https://web.cs.ucdavis.edu/~zubair/>

Prof. Rishab Nithyanand

Assistant Professor, University of Iowa, Iowa
Email: rishab-nithyanand@uiowa.edu
Webpage: <https://sparta.cs.uiowa.edu/people/rishab/>

Prof. Savvas Zannettou

Assistant Professor, TU Delft, Netherlands

Email: s.zannettou@tudelft.nl

Webpage: <https://zsavvas.github.io>

Dr. Nicolas Kourtellis

Co-director, Telefonica Research Labs, Spain

Email: nicolas.kourtellis@telefonica.com

Webpage: <https://www.concordia-h2020.eu/nicolas-kourtellis/>