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# 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** 4.00/4.00

University of California, Davis

2016–20 **B.Tech. in Computer Science** 9.04/10.00

The LNM Institute of Information Technology (LNMIIT), India.

## Publications

arXiv **The Inventory is Dark and Full of Misinformation: Understanding the Abuse of Ad Inventory Pooling in the Ad-Tech Supply Chain**

2022 **Yash Vekaria**, Rishab Nithyanand, Zubair Shafiq  
*Under Submission, 2022*

WebSci **Differential Tracking Across Topical Webpages of Indian News Media**

2021 **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 **Under the Spotlight: Web Tracking in Indian Partisan News Websites**

2021 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 **A Metadata-based Event Detection Method using Temporal Herding Factor and Social Synchrony on Twitter Data**

2021 Nirmal Kumar Sivaraman, Vibhor Agarwal, **Yash Vekaria**, Sakthi Balan Muthiah  
*15th International Conference on Research Challenges in Information Science (RCIS), 2021*

SocInfo **Poster Invitation: Event Detection in Twitter**

2019 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, Gunrock Breakerspace Lab,*  
*Advisor: Prof. Zubair Shafiq*

BATTLING AD-FRAUD: Research focus is towards investigating problematic ad practices followed by ad-tech entities that lead to wide-spread ad-fraud. Currently, I am working to build a system to measure compliance and improve the ad-tech policy standards, click-fraud practices and brand-safety issues in the ad supply chain. My recent research was focused to study and measure the shady practice of dark pooling on misinformation websites.

- Summer 2022 **Max Planck Institute für Informatics** **Saarbrücken, Germany**  
*Visiting Research Fellow, Internet Architecture Group (INET),*  
*Advisor: Prof. Savvas Zannettou*  
**PROBLEMATIC ADS ON SOCIAL MEDIA:** This is an ongoing research project focused on detecting and studying the problematic ads run on Twitter through an automated audit to understand the compliance and violations of Twitter advertising policies, problematic advertiser practices and effectiveness of Twitter's moderation strategies.
- 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.
- Dec 2017 **National Ilan University** **Yilan, Taiwan**  
*Student-Exchange Intern*  
 A student exchange program to learn concepts related to ML and brainstorm ideas.

## 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, Wireshark*

## Honors & Awards

- 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.

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## Peer Review

2023 **15th ACM Web Science Conference** *PC Member*

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## Travel Grants

2022 *22nd Privacy Enhancing Technologies Symposium (PETS)*

2022 *15th ACM Conference on Security & Privacy in Wireless & Mobile Networks (WiSec)*

2021 *42nd IEEE Symposium on Security & Privacy (S&P)*

2021 *34th IEEE Computer Security Foundations Symposium (CSF)*

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## Invited Talks

2021 **Differential Tracking Across Topical Webpages of Indian News Media**

The LNM Institute of Information Technology, India

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## Selected Media Coverage

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

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## References

### **Prof. Zubair Shafiq**

Associate Professor, University of California, Davis

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**Webpage:** <https://web.cs.ucdavis.edu/~zubair/>

### **Prof. Savvas Zannettou**

Assistant Professor, TU Delft, Netherlands

**Email:** [s.zannettou@tudelft.nl](mailto:s.zannettou@tudelft.nl)

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

### **Prof. Rishab Nithyanand**

Assistant Professor, University of Iowa, Iowa

**Email:** [rishab-nithyanand@uiowa.edu](mailto:rishab-nithyanand@uiowa.edu)

**Webpage:** <https://sparta.cs.uiowa.edu/people/rishab/>

### **Dr. Nicolas Kourtellis**

Research Scientist, Telefonica Research Labs, Spain

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