# Mohit Singhal

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#### Research Interests

Social Computing, Machine Learning, Malicious Code Analysis, Content Moderation, Data-driven Fact-checking, Data Mining, Fairness of AI systems

#### EDUCATION

The University of Texas at Arlington

Ph.D. Candidate in Computer Science

In Progress, Aug. 2019 - present

Advisor: Dr. Shirin Nilizadeh

Overall GPA: 3.83

The University of Texas at Arlington

Arlington, TX

Arlington, TX

M.S. in Computer Science Advisor: David Levine

Aug. 2017 - May 2019 Overall GPA: 3.62

Jaypee University of Information Technology

Solan, India

B. Tech in Computer Science & Engineering

Aug. 2013 - May 2017

Overall GPA: 8.1

## Work Experience

Student Instructor

Fall 2021, Spring 2023, & Fall 2023

The University of Texas at Arlington

Arlington, TX

• Taught 80+ students Information Security course (CSE 4380)

STEM Graduate Research Assistant

Spring 2022, & Summer 2023

The University of Texas at Arlington

Arlington, TX

• Worked on algorithmic fairness of Yelp recommendation and ranking systems

### STEM Graduate Teaching Assistant

Fall 2018 - Present

The University of Texas at Arlington

Arlington, TX

- Taught over 150+ students Information Security lab (CSE 4380/5380)
- Developed & Conducted Capture the Flag (CTF) lab

#### Summer Research Intern

Summer 2016

Indian Institute of Technology

Roorkee, India

• Proposed key stroke based password matching technique

#### Summer Research Intern

Summer 2015

The University of Nebraska at Omaha

Omaha, NE

• Developed digital maps to monitor Attrazine levels in Mississippi River

#### Publications

- Singhal, M., Ling, C., Paudel, P., Thota, P., Kumarswamy, N., Stringhini, G., & Nilizadeh, S. (2023, July). SoK: Content moderation in social media, from guidelines to enforcement, and research to practice. In 2023 IEEE 8th European Symposium on Security and Privacy (EuroS&P) (pp. 868-895). IEEE.
- Singhal, M., Kumarswamy, N., Kinhekar, S., & Nilizadeh, S. (2023, June). Cybersecurity Misinformation Detection on Social Media: Case Studies on Phishing Reports and Zoom's Threat. In Proceedings of the International AAAI Conference on Web and Social Media (Vol. 17, pp. 796-807).
- Singhal, M., Kumarswamy, N., Kinhekar, S., & Nilizadeh, S. (2021). Poster: Detecting Misinformation about Zoom's Security and Privacy Threats. In (NDSS 2022). Received Best Technical Poster Award
- Singhal, M., & Levine, D. (2019, October). Analysis and categorization of drive-by download malware. In 2019 4th International Conference on Computing, Communications and Security (ICCCS) (pp. 1-4). IEEE.

## Current Projects

- Kumarswamy, N., **Singhal, M.**, & Nilizadeh, S. (2023, September). Impact of Stricter Content Moderation on Parler's User Discourse. Submitting to ICWSM 2024
- Singhal, M., Pacheco, J., Debi, T., Khorzooghi, S. M. S. M., Asudeh, A., Das, G., & Nilizadeh, S. (2023). Auditing Yelp's Business Ranking and Review Recommendation Through the Lens of Fairness. arXiv preprint arXiv:2308.02129. [Submitted to VLDB 2024]
- Aleksandric, A., **Singhal, M.**, Groggel, A., & Nilizadeh, S. (2022). Understanding the Bystander Effect on Toxic Twitter Conversations. arXiv preprint arXiv:2211.10764. [Submitted to CSCW 2024]
- Salehabadi, N., Groggel, A., Singhal, M., Roy, S. S., & Nilizadeh, S. (2022). User Engagement and the Toxicity of Tweets. arXiv preprint arXiv:2211.03856.

### Broader Impact

- Our paper SoK: Content Moderation in Social Media, from Guidelines to Enforcement, and Research to Practice was cited in the official report submitted to *The Committee on Civil Liberties, Justice and Home Affairs* in **The European Union**.
- Our paper SoK: Content Moderation in Social Media, from Guidelines to Enforcement, and Research to Practice was cited in *amicus curiae brief* submitted in **The Supreme Court** case *Gonzalez v. Google LLC*.

### AWARDS

- Recipient of the Student Travel grant for Euro S&P 2023.
- Awarded the best Ph.D. lightning talk runner-up award for the research lightning talk on *Detecting Misinformation* about Zoom's Security and Privacy Threats at SCRF conference held at The University of Texas at Arlington, 2023.
- Awarded the best project presentation & demo runner-up award for poster Content Moderation in Social Media, from Guidelines to Enforcement, and Research to Practice at SCRFconference held at The University of Texas at Arlington, 2023.
- Awarded *The Outstanding TA award* by The Department of Computer Science & Engineering at The University of Texas at Arlington, 2022.
- Awarded the best technical poster for Detecting Misinformation about Zoom's Security and Privacy Threats at NDSS
  conference, 2022.
- Awarded the best technical poster for *Detecting Misinformation about Zoom's Security and Privacy Threats* at SCRF conference held at The University of Texas at Arlington, 2022.
- Recipient of the Student Travel grant for USENIX Security 2021.
- Awarded the best poster at IEEE MetroCon Conference, 2019.
- Awarded *The Computer Science Scholarship* by The Department of Computer Science & Engineering at The University of Texas at Arlington, 2019.

#### SERVICE

- Program committee member for The 16th Workshop on Cybersecurity Experimentation and Test Workshop (CSET 2023).
- Reviewer for Humanities & Social Sciences Communications Journal
- Sub-reviewer for Transactions on Information Forensics & Security, PoPETs/PETS 2023, Euro S&P 2022, USENIX Security 2020 & 2021, RAID 2020, E-Crimes 2020

## Mentorship

- Mentoring Javier Pacheco (Fall 2022 Present)
- Mentoring Keren Valdez (Fall 2022 Present)
- Mentored Katia Lopez (Spring 2022)
- Mentored Micheal Brady (Fall 2021)
- Mentored Nihal Kumarswamy (Fall 2020 Spring 2022)
- Mentored Shreyasi Kinhekar (Fall 2020 Spring 2022)

# TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, HTML/CSS, R, C#

Developer Tools: Git, Visual Studio, Eclipse, OllyDbg, VMRay, Cuckoo Sandbox, Process Hacker, Process Explorer,

Regshot

Libraries: Pandas, NumPy, Matplotlib, Sklearn, Tensorflow, Keras