Mohit Singhal

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Research Interests

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

EDUCATION

The University of Texas at Arlington

Arlington, TX

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

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

STEM Graduate Teaching Assistant

August 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

May 2016 – August 2016

Indian Institute of Technology

Roorkee, India

• Proposed key stroke based password matching technique

Summer Research Intern

May 2015 – July 2015

 $The\ University\ of\ Nebraska\ at\ Omaha$

Omaha, NE

• Developed digital maps to monitor Attrazine levels in Mississippi River

PROJECTS & PUBLICATIONS

Parler Toxicity | Python, Parler API, Git

July 2021 – Present

- Analyzing the toxicity of conversations on Parler
- Performing in depth analysis of content changes after policy changes

Content Moderation Practices of Social Media Sites

March 2021 – Present

- Analyzing how different social media websites perform content moderation
- Performing in-depth analysis of the shortcoming and future opportunities for content moderation practices
- Submitted our findings to IEEE Euro S&P 2023

$\textbf{Misinformation on Social Media} \mid \textit{Python, Twitter API, CrowdTangle API, Git}$

August 2019 – May 2022

- Developed a command line tool to get tweets
- Implemented a Machine Learning model to classify posts into misinformation & true-positive
- To appear in ICWSM 2023

Tweets Toxicity | Twitter API, Python, R, Google Perspective API, Git

September 2020 – Present

- Implemented a command line interface to get scores about tweets from Google Perspective API
- Implemented scripts in order to study the flow of toxic replies on Twitter
- Working on submitting our findings

Drive-by Download Malware | Python, VMRay Sandbox, Cuckoo Sandbox, VirusTotal August 2017 - May 2019

- Developed a tool for capturing malware samples in the wild
- Implemented Cuckoo Sandbox and VMRay in house to study malware samples
- Co-Author: Singhal, Mohit, and Levine, David . "Analysis and Categorization of Drive-by Download Malware." 2019 4th International Conference on Computing, Communications and Security (ICCCS). IEEE, 2019.

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

Awards & Service

Sub-reviewer: Euro S&P 2022, USENIX Security 2020 & 2021, RAID 2020, E-Crimes 2020 **Awards**:

- Awarded "The Outstanding TA award" by The Department of Computer Science & Engineering at UTA, 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 University of Texas at Arlington, 2022
- Recipent 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 UTA, 2019