Apurva Virkud

https://avirkud.github.io   avirkud2@illinois.edu

EDUCATION

University of Illinois Urbana-Champaign   Aug. 2022 - present
PhD Computer Science
Advisors: Prof. Adam Bates, Prof. Gang Wang
Research Interests: Security, Privacy, Internet Measurement

University of Michigan   Sept. 2016 - May 2020
BSE Computer Science

RESEARCH

University of Illinois Urbana-Champaign | Computer Science   Aug. 2022 - present
Research Advisor: Prof. Adam Bates, Prof. Gang Wang
Graduate Research Assistant, Projects: P1, A1

University of Michigan | Computer Science and Engineering   Dec. 2019 - Jul. 2022
Ensafi Lab | Research Advisor: Prof. Roya Ensafi
Research Associate (11/2020 - 07/2022), *Research Assistant* (02/2020 - 10/2020)
Projects: P2, P3, P4, A2, C1, C2, C3

Michigan Medicine | Radiology   Oct. 2018 - Jul. 2020
Computer Aided Diagnosis Lab | Research Advisor: Prof. Lubomir Hadjiyski
Computer Operator, Projects: A4, P5, A3, P6

UM Transportation Research Institute | Engineering Systems   Jan. 2019 - Apr. 2020
Research Advisor: Sam Lauzon
Research Assistant, Projects: A5

Life Sciences Institute   Sept. 2016 - Oct. 2017
Shawn Xu Lab | Research Advisor: Dr. Adam Iliff
Research Assistant, Projects: A6

PUBLICATIONS

P1 **How do Endpoint Detection Products Make Use of MITRE ATT&CK?**
Apurva Virkud, M. Adil Inam, Andy Riddle, Jason Liu, Gang Wang, Adam Bates
In Submission, 2023

P2 **Network Responses to Russia's Invasion of Ukraine in 2022: A Cautionary Tale for Internet Freedom**
Reethika Ramesh, Ram Sundara Raman, **Apurva Virkud**, Alexandra Dirksen, Armin Huremagic, David Fifield, Dirk Rodenberg, Rod Hynes, Doug Madory, Roya Ensafi
USENIX Security Symposium, Aug. 2023

P3 **Advancing the Art of Censorship Data Analysis**
Ram Sundara Raman, **Apurva Virkud**, Sarah Laplante, Vincius Fortuna, Roya Ensafi
Free and Open Communications on the Internet (FOCI), Feb. 2023

P4 **A Large-Scale Investigation into Geodifferences in Mobile Apps**
Renuka Kumar, **Apurva Virkud**, Ram Sundara Raman, Atul Prakash, Roya Ensafi
USENIX Security Symposium, Aug. 2022

P5 **Prediction of Disease Free Survival in Laryngeal and Hypopharyngeal Cancers Using CT Perfusion and Radiomic Features: A Pilot Study**
Sean Woolen, **Apurva Virkud**, Lubomir Hadjiiski, Kenny Cha, Heang-Ping Chan, Francis Worden, Paul Swiecicki, Ashok Srinivasan
Tomography, Feb. 2021

P6 **Standardization in Quantitative Imaging: A Multicenter Comparison of Radiomic Features from Different Software Packages on Digital Reference Objects and Patient Data Sets**
Michael McNitt-Gray, **et al**.
Tomography, Jun. 2020

ABSTRACTS AND PRESENTATIONS

A1 **Poster: How do Endpoint Detection Products Make Use of MITRE ATT&CK?**
Apurva Virkud, Muhammad Adil Inam, Andy Riddle, Gang Wang, Adam Bates.
IEEE Symposium on Security and Privacy, May 2023

A2 **Censored Planet Community Webinar**
Roya Ensafi, Ram Sundara Raman, **Apurva Virkud**, Elisa Tsai, Armin Huremagic.
Oct. 2021

A3 **Standardization in Quantitative Imaging: A Multi-Center Comparison of Radiomics Feature Values Obtained by Different Software Packages on Digital Reference Objects and Patient Datasets**
Michael McNitt-Gray*, **et al**.
*RSNA, Dec. 2019

A4 **Exploratory Study for Identifying Predictors for Persistent Disease and Tumor Reoccurrence After Treatment of Head and Neck Cancers**
Sean Woolen*, **Apurva Virkud**, Lubomir Hadjiiski, Kenny Cha, Heang-Ping Chan, Francis Worden, Paul Swiecicki, Ashok Srinivasan
*RSNA, Dec. 2019

A5 **Security Analysis of ADAS and Automated Driving Systems**
Apurva Virkud*, Sam Lauzon
*MEDC Internship Poster Reception, Apr. 2019
*MI ITS Annual Meeting, Sept. 2019

A6 **A low cost bio-imaging system incorporating machine learning algorithms for automatic analysis of animal behavior**
Adam Iliff*, **Apurva Virkud****, Shawn Xu
*International *C. elegans* Conference, Jun. 2017
**University of Michigan UROP Symposium, Apr. 2017

OPEN-SOURCE

C1 **GeoInspector**
https://github.com/censoredplanet/geoinspector
Toolkit for measuring server-side blocking.

C2 **Censored Planet Analysis**
   https://github.com/censoredplanet/censoredplanet-analysis
   Analysis pipeline for the Censored Planet data, developed in collaboration with Jigsaw.

C3 **geodiff-app**
   https://github.com/censoredplanet/geodiff-app
   Measurement code to download data from Google Play.

HONORS AND AWARDS

Travel Grant, Internet Measurement Conference	2023
Student Poster Winner, Michigan ITS Meeting	2019
Regents Merit Scholarship, University of Michigan	2016
Tournament Scholarship, Michigan Chess Association	2016
National Master, United States Chess Federation	2014
National Girls Invitational Tournament Scholarship, US Chess Trust	2013

ACTIVITIES

Programming Committee, YKB   Sept. 2018 - Apr. 2020
Organized educational workshops, performances, and other events related to social justice, including our annual monologue show (200+ attendees) and first professional panel (now annual).

Outreach Committee, gEECS   Jan. 2017 - Dec. 2017
Organized an Arduino workshop for high school students.

OTHER EXPERIENCE

Grader, TO 630: New Age of Innovation	Fall 2018
Software Engineer Intern, Uptake	Jun. 2018 - Aug. 2018
Chess Instructor	Sept. 2014 - Apr. 2020