Dhruv Kuchhal

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Research Interests

I have 4+ years experience of working on real-world computer security problems, often involving measuring, analyzing and understanding large-scale data from Internet-wide systems.

Education

- **Georgia Institute of Technology** — Atlanta, GA
  Doctor of Philosophy in Computer Science — *2019 – 2024*

- **Guru Gobind Singh Indraprastha University** — Delhi, India
  Bachelor of Technology in Information Technology — *2014 – 2018*

Selected Publications

Conference

- **Kuchhal, D.** and Li, F.,
  A View into YouTube View Fraud.
  currently under review.

- **Kuchhal, D.** and Li, F.,
  Knock and Talk: Investigating Local Network Communications on Websites.
  ACM Internet Measurement Conference (**IMC**), 2021.
  Acceptance Rate: 27% (53/196) [dl.acm.org] [pdf]

- Redmiles, E.M., Maszkiewicz, L., Hwang E., **Kuchhal, D.**, Liu, E., Morales, M., Peskov, D., Rao, S., Stevens, R., Gligorić, K., Kross, K., Mazurek, M.L., Daume III, H.,
  Comparing and Developing Tools to Measure the Readability of Domain-Specific Texts.
  Conference on Empirical Methods in Natural Language Processing (**EMNLP-IJCNLP**), 2019.
  Acceptance Rate: 23.8% (684/2877) [aclweb.org] [pdf]

- Redmiles, E.M., Zhu, Z., Kross, S., **Kuchhal, D.**, Dumitras, T. and Mazurek, M.L.,
  Asking for a Friend: Evaluating Response Biases in Security User Studies.
  ACM Conference on Computer and Communications Security (**CCS**), 2018.
  Acceptance Rate: 16% (134/809) [dl.acm.org] [pdf]

- Gupta, S., **Kuchhal, D.**, Gupta, P., Ahamad, M., Gupta, M. and Kumaraguru, P.,
  Under the Shadow of Sunshine: Characterizing Spam Campaigns Abusing Phone Numbers Across Online Social Networks*.
  ACM Conference on Web Science (**WebSci**), 2018.
  Acceptance Rate: 27% (30/113) [dl.acm.org] [pdf]
  Award: **Runner up for Best Student Paper**

Journal

- Gupta, S., Bhatia, G., Suri, S., **Kuchhal, D.**, Gupta, P., Ahamad, M., Gupta, M. and Kumaraguru, P.,
  Angel or Demon? Characterizing Variations Across Twitter Timeline of Technical Support Campaigners.
  The Journal Of Web Science, 2019 [webscience-journal.net] [pdf]

Experience

PayPal, Inc.   Scottsdale, AZ
Information Security PhD Intern   *Summer 2021*
- **Managers**: Dr. Adam Oest (Research Scientist) and Dr. RC Johnson (Head of Security Research).
- **Work**: Exploring deployment efficacy of passwordless authentication (FIDO2).

Georgia Institute of Technology (Georgia Tech)   Atlanta, GA
Graduate Research Assistant   *2020 - present*
- **Area**: Empirical Measurement, Security and Privacy.
- **Advisor**: Prof. Frank Li.
- **Projects**:
  - Investigating local network communications on websites.
  - Investigating the YouTube view fraud ecosystem.

University of Maryland, College Park (UMD)   College Park, MD
Research Assistant at Security, Privacy, People Lab (SP2)   *2017 - 2018*
- **Area**: Usable Privacy and Security.
- **Advisors**: Prof. Michelle Mazurek and Prof. Elissa Redmiles.
- **Projects**:
  - Measuring and improving readability of security advice.
  - Evaluating response biases in security user studies.

Indraprastha Institute of Information Technology, Delhi (IIIT-D)   Delhi, India
Undergraduate Researcher and Research Associate at PreCog Research Lab   *2017 - 2019*
- **Area**: Social Computing - Security and Privacy on Online Social Networks (OSNs).
- **Advisor**: Prof. Ponnurangam Kumaraguru.
- **Projects**:
  - Detecting cross-platform spam on online social networks.
  - Detecting and mitigating misinformation on WhatsApp.[technical details, press]

Relevant Graduate Coursework

CS6250 - Computer Networks, **CS6262** - Network Security, **CS8803** - Empirical Measurement and Security, **CS6238** - Secure Computer Systems, **ECE4894** - Malware Reverse Engineering, **CS7641** - Machine Learning, **CS6515** - Graduate Algorithms and **CS6260** - Applied Cryptography.

Teaching

- **GTA/CS6262 - Network Security**: Responsible for redesigning and grading the Network Monitoring project and holding office hours in Spring and Summer semesters in 2020, with Prof. Wenke Lee.

Achievements/Honors

- **USC Annenberg Fellowship, 2019**: Received a 4-year fellowship of USD 34k to pursue a PhD in CS at USC.

- **ACM CCS Student Travel Grant, 2018**: Received a grant of USD 1k to attend ACM CCS in Toronto, Canada.

- **Smart India Hackathon, 2017**: Our team of 6 members advised by Dr. Sambuddha Roy won the first prize at India's national hackathon (10k+ students), with a total cash prize of Rs. 2 lakh awarded by Government of India. [GitHub]

- **Recognition of Service Award from ACM, 2016**: Received as founding Chair of a 80+ strong team of ACM-MAIT Student Chapter.

Service

- **Reviewing**: External reviewer, PoPETS '22.

- **Georgia Tech Student Employee Advisory Board**: Board Member, 2021-22 AY.

- **Georgia Tech School of Computer Science SGA**: Founding member and communications chair, 2021-22 AY.

- **India Club at Georgia Tech**: Board member, 2020-21 AY.

- **Georgia Tech CS PhD admit visit days**: Member of organising committee, 2019-21 AYs.