Dhruv Kuchhal

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October 29, 2020
LinkedIn
Google Scholar

EDUCATION

Georgia Institute of Technology — Atlanta, GA, USA
PhD in Computer Science; Empirical Measurement and Security; advised by Dr. Frank Li. — *2019 – Present*

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

EXPERIENCE

Indraprastha Institute of Information Technology, Delhi (IIIT-D) — Delhi, India
Undergraduate Researcher and Research Associate at PreCog Research Lab — *December 2016 - February 2019*

- **Area**: Social Computing - Security and Privacy on Online Social Networks (OSNs).
- **Advisor**: Prof. Ponnurangam Kumaraguru.
- **Work**: As an undergraduate, I worked on a characterization study of cross-platform campaigns that use multiple OSN platforms and phone numbers for monetization. See publications for details. Later, I also worked on understanding and building tools to mitigate misinformation on WhatsApp. Details here. Media coverage here.

University of Maryland, College Park (UMD) — remotely from Delhi, India
Research Assistant at Security, Privacy, People Lab (SP2) — *December 2017 - December 2018*

- **Area**: Usable Privacy and Security.
- **Advisors**: Prof. Michelle Mazurek and Dr. Elissa Redmiles.
- **Work**: Research focuses on understanding whether users make rational security decisions and improving the quality of security advice via qualitative, quantitative, and data science projects. See publications for details.

All India Council for Technical Education (AICTE), MHRD, GoI — Delhi, India
Research and Development Intern — *October 2017 - March 2018*

- **Problem Statement**: Prediction of Admission & Jobs in Engineering & Technology/Management/Pharmacy.
- **Advisors**: Dr. N.H. Siddalingaswamy (Director, AICTE).
- **Work**: In a team of 5 and with a project budget of Rs. 3 lakh, we analyzed AICTE's employment statistics dataset and developed dynamic analytic dashboards to aid AICTE in granting approvals to higher education institutions.

PUBLICATIONS

CONFERENCE

- **Kuchhal, D.** and Li, F.,
  Knock and Talk: Investigating Local Network Communications on Websites.
  currently under submission at WWW 2021

- Redmiles, E.M., Maszkiewicz, L., Hwang E., **Kuchhal, D.**, Liu, E., Morales, M., Peskov, D., Rao, S., Stevens, R., Gligori, K., Kross, K., Mazurek, M.L., Daume III, H.,
  Comparing and Developing Tools to Measure the Readability of Domain-Specific Texts.
  2019 Conference on Empirical Methods in Natural Language Processing (**EMNLP-IJCNLP 2019**).
  Acceptance Rate: 23.8% (684/2877) [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.
  The 25th 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*.
  The 10th ACM Conference on Web Science (**WebSci**), Amsterdam, Netherlands, 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 [pdf]

Workshop

- Redmiles, E.M., Morales, M., Maszkiewicz, L., Stevens R., Liu E., **Kuchhal, D.** and Mazurek, M.L., **First Steps Toward Measuring the Readability of Security Advice.**
  The 2018 IEEE Security & Privacy Workshop on Technology and Consumer Protection (**ConPro**), San Francisco, USA, 2018. [ieee-security.org] [pdf]

Posters

- Redmiles, E. M., Hwang, E., **Kuchhal, D.**, Liu, E., Maszkiewicz, L., Morales, M., Peskov, D., Stevens, R., and Mazurek, M. L., **Measuring Security Advice Quality: First Steps.** The 27th **USENIX** Security Symposium, 2018. [proposal pdf]

- *I presented this poster at CCS2018:* Redmiles, E. M., Dickerson, J. P., Gummadi, K. and Mazurek, M. L., **Equitable Security: Optimizing Distribution of Nudges and Resources.** The 25th ACM Conference on Computer and Communications Security (**CCS**), 2018. [dl.acm.org] [poster pdf] [proposal pdf]

Relevant Graduate Coursework

- **CS8803 - Empirical Measurement and Security**: Instructor: Prof. Paul Pearce.
- **CS6238 - Secure Computer Systems**: Instructor: Prof. Mustaque Ahamad.
- **ECE4894 - Malware Reverse Engineering**: Instructor: Prof. Brendan Saltaformaggio.
- **CS7641 - Machine Learning**: Instructor: Dr. Mahdi Roozbahani.
- **CS6262 - Network Security**: Instructor: Prof. Wenke Lee.
- **CS6250 - Computer Networks**: Instructor: Prof. Mostafa Ammar.

Teaching

- **Spring 2020/CS6262 - Network Security**: $\sim$ 220 students, with Prof. Wenke Lee.
- **Summer 2020/CS6262 - Network Security**: $\sim$ 170 students, with Prof. Wenke Lee.

Achievements

- **Smart India Hackathon 2017, MHRD, Government of India**: Our team of 6 members advised by Dr. Sambuddha Roy won the first prize with a total cash prize of Rs. 2 lakh awarded by Government of India. [GitHub]

- **Association for Computing Machinery (ACM)**: Received 'Recognition of Service Award' as founding Chair of a 80+ strong team of ACM-MAIT Student Chapter.

- **ACM CCS Student Travel Grant**: Was awarded a grant of USD 1000 to attend ACM CCS in Toronto, Canada.