

Sumeet Kumar

Indian School of Business
Hyderabad, India
India - 500032

Mobile: +91- 70219-42788

Email: sumeet_kumar@isb.edu

Website: <http://sumeetkumar.in>

Projects: <https://github.com/sumeetkr>

I am interested in research problems at the intersection of **technology and society**. My current focus is on finding implicit/hidden advertisements in videos posted on kids platforms like YouTube kids. Other ongoing projects include analyzing user behavior on online platforms, quantifying polarization on online forums, presence of advertisements disguised as news on news platforms etc. Additionally, I have also conducted research on **user experience**, investigating the use of **phone sensors in emergencies** to improve situational awareness. My teams' study on the wireless-emergency-alerting (WEA) service addressed several issues of central importance to emergency alerts' effectiveness and adoption. Some of our [recommendations](#)¹ were included in the US Federal Communications Commission (FCC) proposed [changes](#)² to WEA.

Professional Experience

Assistant Professor, Indian School of Business, Hyderabad, India (Sep 2020 - till now)

Research Assistant at Carnegie Mellon University, Pittsburgh, USA (Aug 2014- May 2020)

Software Engineer at Symantec Corporation, Mountain View, USA (Sep 2013- Aug 2014)

Development Engineer at Talentica Software, Pune, India (July 2010 - Nov 2011)

Software Analyst at Intergraph, Hyderabad, India (August 2007 - July 2010)

Education

Ph.D. in Societal Computing, School of Computer Science, **Carnegie Mellon University**, May 2020

Thesis Title: **Social Media Analytics for Stance Mining - A Multi-Modal Approach with Weak Supervision**

Committee Members: Dr. Kathleen M. Carley, Dr. Tom Mitchell, Dr. LP Morency, Dr. Huan Liu

MS in Machine Learning, School of Computer Science, **Carnegie Mellon University**, Dec 2018, QPA:3.87/4.0

MS in Software Engineering, Carnegie Institute of Technology, **Carnegie Mellon University**, Aug 2013, QPA:3.96/4.0

BTech in Aerospace Engineering, **Indian Institute of Technology Kanpur (IIT Kanpur)**, July 2007, CPI:7.1/10.0

Research in Progress: For new publications, check <https://scholar.google.com/citations?user=5Qc6lfYAAAAJ>

1. **Sumeet Kumar**, Tom Mitchell, Kathleen M. Carley, **Co-Training on Social Networks: A Joint Label Propagation and Text Classification Approach for Stance Mining**
2. **Sumeet Kumar**, Ramon Villa Cox, Binxuan Huang, Kathleen Carley, **Stance2Vec: A Deep Learning Model to Predict Stance Taken in Reply Posts Using Weak Supervision**
3. **Sumeet Kumar**, Vandith Pamuru, Deepa Mani, **Block Ryan's Toys Reviews? The Perils of Implicit Advertisements on YouTube for Kids**, Workshop on Information Technologies and Systems (under review)

Publications in Refereed Journals

4. David M. Beskow, **Sumeet Kumar**, Kathleen M. Carley, The evolution of political memes: Detecting and characterizing internet memes with multi-modal deep learning, Information Processing & Management, Volume 57, Issue 2, 2020, <https://doi.org/10.1016/j.ipm.2019.102170>.
5. Babcock, M., Cox, R.A.V. and **Kumar, Sumeet**, **Diffusion of Pro-and Anti-false Information Tweets: the Black Panther Movie Case**. *Computational and Mathematical Organization Theory*,25(1),pp.72-84.2019 DOI:[10.1007/s10588-018-09286-x](https://doi.org/10.1007/s10588-018-09286-x)
6. **Sumeet Kumar**, Hakan Erdogmus, Bob Iannucci, Martin Griss, and João Diogo Falcão. 2018. **Rethinking the Future of Wireless Emergency Alerts: A Comprehensive Study of Technical and Conceptual Improvements**. (UBICOMP and IMWUT) Proc. ACM Interact. Mob. Wearable Ubiquitous Technol. 2, 2, Article 71 (July 2018), 33 pages. DOI:[10.1145/3214274](https://doi.org/10.1145/3214274)

¹https://www.dhs.gov/sites/default/files/publications/WEA%20Final%20Report%20CMU-SV_OCC%20next%20version%201-20-2016_revKL508C.pdf

²<https://www.fcc.gov/news-events/blog/2018/04/10/wireless-emergency-alerts-update>

Publications in Peer Reviewed Conference Proceedings

7. **Sumeet Kumar**, Kathleen M. Carley, **What to Track on the Twitter Streaming API? A Knapsack Bandits Approach to Dynamically Update the Search Terms**, ASONAM Conference, Vancouver, Canada, 2019 [link](#)
8. **Sumeet Kumar**, Kathleen M. Carley, **Tree LSTMs with Convolution Units to Predict Stance and Rumor Veracity in Social Media Conversations**, ACL Conference, 5047--5058, Florence, Italy, 2019 <https://www.aclweb.org/anthology/P19-1498>
9. **Sumeet Kumar**, Kathleen M. Carley, **People2Vec: Learning Latent Representation of Social Media Users**, SBP-BRiMS, 154-163, Washington DC, 2018 DOI:[10.1007/978-3-319-93372-6_17](https://doi.org/10.1007/978-3-319-93372-6_17)
10. **Kumar, Sumeet & Carley, Kathleen. Simulating Attacks on the US Fiber-Optics Internet Infrastructure**, 50th conference on Winter simulation. Winter Simulation Conference, Las Vegas. 2017 DOI:[10.1109/WSC.2017.8247869](https://doi.org/10.1109/WSC.2017.8247869)
11. **Sumeet Kumar**, Matthew Benigni, and Kathleen M. Carley, **The Impact of US Cyber Policies on Cyber-Attacks Trend**, IEEE Conference on Intelligence and Security Informatics (ISI), 181-186, Tucson, US, 2016 DOI:[10.1109/ISI.2016.7745464](https://doi.org/10.1109/ISI.2016.7745464)
12. **Sumeet Kumar**, Kathleen M. Carley, **Approaches to Understanding the Motivations Behind Cyber Attacks**, IEEE Conference on Intelligence and Security Informatics (ISI), 307-309, Tucson, Arizona, US, 2016 DOI:[10.1109/ISI.2016.7745496](https://doi.org/10.1109/ISI.2016.7745496)
13. **Sumeet Kumar**, Hakan Erdogmus, João Diogo Falcão, Martin Griss, Bob Iannucci, **Location-Aware Wireless Emergency Alerts**, IEEE Homeland Security Technologies Conference, Boston, USA, 2016, DOI: [10.1109/THS.2016.7568902](https://doi.org/10.1109/THS.2016.7568902)
14. Bob Iannucci, João Diogo Falcão, **Sumeet Kumar**, Hakan Erdogmus, Martin Griss, **From Alerting to Awareness**, IEEE Homeland Security Technologies Conference, Boston, USA, 2016 DOI:[10.1109/THS.2016.7801354](https://doi.org/10.1109/THS.2016.7801354)
15. Jia Zhang, Bob Iannucci, Mark Hennessy, Kaushik Gopal, Sean Xiao, **Sumeet Kumar**, **. A Federated Platform for Mobile Data-Centric Service Development and Sharing"**, in Proceedings of 2013 IEEE 10th International Conference on Services Computing (SCC), Santa Clara, California, USA, pp. 446-453, 2013 DOI:[10.1109/SCC.2013.34](https://doi.org/10.1109/SCC.2013.34)

Publications in Peer-Reviewed Workshop Proceedings

16. João Diogo Falcão, Joel Krebs, **Sumeet Kumar**, and Hakan Erdogmus. 2018. **OpenAlerts: A Software System to Evaluate Smart Emergency Alerts and Notifications**. In Proceedings of the 2018 ACM International Joint Conference and 2018 International Symposium on Pervasive and Ubiquitous Computing and Wearable Computers (UbiComp '18). ACM, New York, NY, USA, 1250-1255. DOI:[10.1145/3267305.3274115](https://doi.org/10.1145/3267305.3274115)
17. **Sumeet Kumar** and Kathleen M. Carley. 2018. **Towards Group-Activities Based Community Detection**. In Proceedings of the 2018 ACM International Joint Conference and 2018 International Symposium on Pervasive and Ubiquitous Computing and Wearable Computers (UbiComp '18). ACM, New York, NY, USA, 1178-1183. DOI:[10.1145/3267305.3274765](https://doi.org/10.1145/3267305.3274765)
18. **Sumeet Kumar**, Kathleen M. Carley, **Understanding DDoS Cyber-Attacks using Social Media Analytics**, IEEE Conference on Intelligence and Security Informatics (ISI), 231-236, Tucson, US, 2016 DOI:[10.1109/ISI.2016.7745480](https://doi.org/10.1109/ISI.2016.7745480)
19. **Sumeet Kumar**, Kathleen M. Carley, **DDoS cyber-attacks network: Who's attacking whom**, IEEE Conference on Intelligence and Security Informatics (ISI), 218-218, Tucson, Arizona, US, 2016 DOI:[10.1109/ISI.2016.7745476](https://doi.org/10.1109/ISI.2016.7745476)
20. **Sumeet Kumar**, Le T. Nguyen, Ming Zeng, Kate Liu, and Joy Zhang. 2015. **Sound Shredding: Privacy Preserved Audio Sensing**. In Proceedings of the 16th International Workshop on Mobile Computing Systems and Applications (HotMobile '15). ACM, New York, NY, USA, 135-140. , 2015 DOI:[10.1145/2699343.2699366](https://doi.org/10.1145/2699343.2699366)

Teaching and Tutorials

- I along with Kenneth Joseph and Fred Morstatter gave a tutorial titled 'Challenges in Detecting Events with Social Media Data: Collecting, Modeling, and Exploring' at the SBP-BRiMS 2016 conference.
- At CMU, as a Teaching Assistant, I have given lectures on Dynamic Network Analysis and Software Engineering
- I taught topic modeling ('LDA & LSA') and 'Geo-temporal Networks' in CASOS Summer Institute 2017, 18, 19
- I have taught Software Design Patterns and Architectures at the companies where I worked previously

Awards and Recognitions

- Challenge problem runner up at SBP-BRiMS Conference, 2018
- CMU Carnegie Institute of Technology Dean's Fellowship 2014-15
- Three 'Applause Level 3' awards in a year's time frame (2013-2014) at Symantec, Mountain View.
- Star Team Award 2009 and Three "Pat on the Back" awards at Intergraph, India in three years

Programming Languages: Python, Java, C#, Ruby, JavaScript, VB.Net, SQL

Other Skills: Software Design & Architecture, Android Development, Windows Desktop Applications Development