PRIVACY AND SECURITY IN ONLINE SOCIAL MEDIA

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PRE-REQUISITES : Basic / Intermediate programming course. Understanding of Python will be necessary for the course. Should be able to quickly learn APIs, and to collect data from social networks.

INTENDED AUDIENCE : Interested stundents

INDUSTRIES APPLICABLE TO : Any company which is interested in social media / networks data will be interested in recruiting the students finishing the course.

COURSE OUTLINE :

With increase in the usage of the Internet, there has been an exponential increase in the use of online social media and networks on the Internet. Websites like Facebook, YouTube, LinkedIn, Twitter, Flickr, Instagram, Google+, FourSquare, Pinterest, Tinder, and the likes have changed the way the Internet is being used. However, widely used, there is a lack of understanding of privacy and security issues on online social media. Privacy and security of online social media need to be investigated, studied and characterized from various perspectives (computational, cultural, psychological, etc.). Student completing the course will be able to appreciate various privacy and security concerns (spam, phishing, fraud nodes, identity theft) on Online Social Media and Student will be able to clearly articulate one or two concerns comprehensively on one Online Social Media, this will be achieved by homework.

ABOUT INSTRUCTOR :

Prof.Ponnurangam Kumaraguru ("PK") is a Professor of Computer Science at IIIT-Hyderabad. He is a Visiting Faculty at IIT Kanpur and an Adjunct faculty at IIIT Delhi. PK is an ACM India Council Member, and Chair of the Publicity & Membership Committee of ACM India. PK is a TEDx and an ACM Distinguished & ACM India Eminent Speaker. PK received his Ph.D. from the School of Computer Science at Carnegie Mellon University (CMU). His Ph.D. thesis work on anti-phishing research at CMU contributed in creating an award-winning startup - Wombat Security Technologies, wombatsecurity.com. Wombat was acquired in March 2018 for USD 225 Million. PK was listed in the World's 2% Scientists by Stanford University in Nov 2020. He is a senate member of IIIT Una, and is on various Board of Studies / Academic Council of different institutes across the country. PK has been teaching on NPTEL for the last 5 years, with great feedback from students. He has co-authored research papers in the field of Privacy and Security in Online Social Media, Cyber Security, Computational Social Science, Social Computing, Data Science for Social Good, amongst others. PK's research work regularly gets featured on news media, including print, online, and TV within India and across the world; to list a few, BBC, CBC, CBS, CNN, Doordarshan, Economic Times, Indian Express, NBC, New Scientist, NewYorker, Reuters, Times of India, USA Today, Washington Post, and many more. PK Spear heads ACM India's programs on improving the quality of PhD students in Computing in India -- PhDClinic & Anveshan Setu Fellowship. In his Dean's role at IITD, he managed a team of 15 faculty members and 10+ admin staff, including Associate Dean of Student Affairs, overseeing hostel, sports centre, health centre, student {well-being, clubs, mentorship program}, technical & cultural fests. He was the Founding Head of Cybersecurity Education and Research Centre (CERC) at IIIT-Delhi. PK started and successfully manages PreCog (precog.iiitd.edu.in), a research group at IIIT-Delhi and IIIT Hyderabad. In addition to his contributions to academia, PK is on advisory role on various government organizations, government committees, including a 8 member committee on Non-Personal Data by Government of India, chaired by Mr. Kris Gopalakrishnan.

COURSE PLAN :

Week 1: What is Online Social Networks, data collection from social networks, challenges, opportunities, and pitfalls in online social networks, APIs

Week 2: Collecting data from Online Social Media.

Week 3: Trust, credibility, and reputations in social systems

Week 4: Trust, credibility, and reputations in social systems, cont'd

Week 5: Online social Media and Policing

Week 6: Information privacy disclosure, revelation and its effects in OSM and online social networks

Week 7: Phishing in OSM & Identifying fraudulent entities in online social networks

Week 8: Refresher for all topics

Week 9 to 12 : Research paper discussion