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Required Student Instrument: Part 4

Dear student. In many of the courses you have taken during your study you will recall that the instructor took pains to discuss the impact of computing in the world, with examples, case studies and exercises. It is little exaggeration to say that computing may be the defining technology of our time, and that we are (still) living in the information age. Likewise, in many of the courses you have taken during your study you will recall that the instructor emphasized the need to engage in continuing professional development for the rest of your professional career. As computer science and computer engineering are constantly evolving, computing professionals are faced with the need to keep abreast of new tools, techniques, trends, technologies, law and regulations etc.

In this exercise we would like you practice and demonstrate what you have learned from the above. Consider a recent

- Product: Google glasses, 3D printer, Nao robot, Lytro (light field camera), consumer 3D cameras, consumer-priced drone aircraft, bendable interfaces, wearable tech devices, self driving cars, Mars curiosity robot, GO/DART/Ceylon and other new programming languages...
- Practice: cloud computing, NFC and mobile payments, voice control for mobile devices, HTML5, multi-core CPUs, platform as a service (PaaS), infrastructure as a service (IaaS), Big
- Data, increasing, crowdsourcing, universities moving to massive open online courses (MOOC),...
- Event: The Arab Spring (widely acknowledged to have been facilitated by social media), the 2012 Presidential election (it is believed that Big Data/Data mining provided an advantage), widely publicized incidences of cyberbullying that lead to suicides of young teens,...

Now consider some of the professional organizations in computing/engineering, including: ACM - Association for Computing Machinery, IEEE - Institute of Electrical and Electronics Engineers, ISACA - Information Systems Audit and Control Association, NASCE - National Association of Communication Systems Engineers, Institute for Women and Technology, CPSR - Computer Professionals for Social Responsibility (this is only a small representative list). Take any product, practice or event (PPE) in computing/computer engineering that interests you (it does not have to be from the list above), and write a 1,000 word essay about it. In particular, consider the role that a professional organization has taken (or, in your view, should take) in reference to the product, practice or event. Your essay should have some element of advocacy. That is to say you should argue for or against some trend with your chosen PPE, or argue that some PPE

is good or bad for everyone/people in developing communities/the taxpayer/animal rights/the disabled etc.

ANS:

Voice control for mobile devices

Voice control is a recent technology that has been growing rapidly since the introduction of smartphones nearly a decade ago and more recently see it being introduced to everyday home appliances such as TV's or refrigerators or even dedicated devices such as Amazon Echo.This technology is meant to facilitate our interaction with computers, but is it also facilitating the destruction of our privacy?

This breach of privacy was an immediate concern when Siri was first introduced, but more recently Samsung has come under fire with a change to their privacy policy regarding SmartTVs. It specifically states that "...spoken words include personal or other sensitive information, that information will be among the data captured and transmitted to a third party through your use of Voice Recognition" (Natasha, 2015).

It is important that all consumers are made aware of this fact that the majority of smart devices with voice recognition could be actively listening to every conversation and sending them back to servers to be analyzed. Of course, the companies providing these features are only trying to provide a service that will attract customers, but there are more nefarious third parties that can take advantage of this technology now that it has become available.

Early iterations of Siri introduced serious security flaws to the iPhone as someone could simply gain control of the phone through voice commands without having to input a password. Another security flaw involved spoofing Apple certificates to intercept calls via Siri. These examples need to be taken into great consideration by not only Apple, but all other companies that seek to implement similar features.

Privacy should not just be thrown out the window because of some disclaimer that a consumer is automatically forced to accept simply by purchasing or using a product or service. Sadly, the average consumer does exactly that and puts little to attention to what actually happens to their personal information.

Even if you personally do not use voice recognition technology, it's likely that your voice is being recorded numerous times every day as the technology has simply proliferated that quickly such that any smartphone you encounter likely has this ability.

Since voice recognition technology is in its relative infancy, it is even more important to take a stance on privacy as once the general population becomes content with

Sources (6)

Bainer, Jamey. "Is Voice Recognition Prone to Security Threats?" Web blog post. WebRoot. N.p., Unknown. Web. 7 May 2016. <http://www.webroot.com/us/en/home/resources/articles/mobile-security/is-voice-recognition-prone-to-security-threats/>.

Lomas, Natasha. "Today In Creepy Privacy Policies, Samsung's Eavesdropping TV." Web blog post. TechCrunch. N.p., 8 Feb. 2015. Web. 7 May 2016. <http://techcrunch.com/2015/02/08/telescreen/>.

Matyszczyk, Chris. "Samsung changes Smart TV privacy policy in wake of spying fears" Web blog post. CNET. N.p., 10 Feb. 2015. Web. 7 May 2016. <http://www.cnet.com/news/samsung-changes-smarttv-privacy-policy-in-wake-of-spying-fears/>.

Margi, Murphy. "What Exactly is OK (for) Google? Voicing Voice Privacy Concerns" Web blog post. TechWorld. N.p., 19 Aug. 2015. Web. 7 May 2016. <http://www.techworld.com/news/big-data/deep-learning-ai-cold-war-spells-privacy-concerns-3623347/>.

Fitzsimmons, Kelly. "What Exactly is OK (for) Google? Voicing Voice Privacy Concerns" Web blog post. SharedAssessments. N.p., 27 Aug. 2015. Web. 7 May 2016. <http://sharedassessments.org/2015/08/what-exactly-is-ok-for-google-voicing-voice-privacy-concerns/>.

Weise, Elizabeth. "Hey, Siri and Alexa: Let's talk privacy practices" Web blog post. USATODAY. N.p., 2 Mar. 2016. Web. 7 May 2016. <http://www.usatoday.com/story/tech/news/2016/03/02/voice-privacy-computers-listening-rsa-echo-siri-hey-google-cortana/81134864/>.