Essay 1

(1) Analyzing the local and global impact of computing on individuals, organizations, and society and (2) Recognition of the need for and an ability to engage in continuing professional development

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**: iPad, 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**: Presidential election 2016 hacks, 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 or 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 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. You 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.

Hand In: An essay, with six or more cited sources, on the topic(s) discussed above. You are encouraged to run your idea by the TA before you begin your research. Your topic may be closely tied to your project, or totally independent This is an individual assignment.