# Some Critical Thinking bad to humanity

**Talked about engineering as a profession.**

I don’t know about the engineering code of conduct before, when I was doing project, I was the only one who is responsible to this work, I could make whatever modifications to this without asking permission from anyone else. But, things are different in real world. Putting your hands on the keyboard doesn’t mean that you are the only god in the virtue world, as a developing profession, software engineering already has mature organizations that regulate the code of conduct we must obey. This is much more like the relationship between supplier and customer, thought most of the progress are not visible and vivid.

**Doing good things doesn’t mean you are doing things good.**

You are a police officer, it is your job to shoot the bad guys, but can you break in a resident’s house without their permissions? Sure you can, government has given you the right to do that, because of public safety. But in software engineering, the answer is ----No you definitely can’t if you follow the code of conduct of software engineering. So what we were basically taught at school is you shouldn’t inject programs other than the required applications to your client’s computer without notify them, but the fact is, whenever I tried downloading something from the Internet, I have to be super careful to the link and everything that directs me to other useless virus site. Maybe the programmer are not educated with the code of conduct.

# Whom to be blamed

Software failures are quite often. However, there are complex reasons for causing a software failure. The incorrectness of source code, miscommunication between the developers, unsuitable model of developing, personality of team leader, bad design of user interface, loss of integrity in developers. These consequence all contributed to a total failure. Which reminds me of, the failure of the space shuttle challenger disaster.

A product or project manager is essential to the entire team, which can be a display of personality and leadership, will inspire the creativity of crew members.

# Ethical reasoning And Critical analysis

As mentioned before, there are many existing code of conduct to obey, and in any circumstances related to ethical layer, one shouldn’t attempt to break any of these rules. If any of these issues unfortunately get involved, there will be ethical judgement around it. That was proved in the following discussion.

So in that case, here are list of things you shouldn’t do if you do want to get in the discussion:

* Accepting a contract for part of a project where you believe the project will fail.
* *Developer relying on questionable inputs to test software.*
* *Accessing commercial computer services.*
* *Building on existing software.*
* *Diverting project funds.*
* *Developer encroaching on consultant's business.*

That was quite controversial and it actually was a contradiction, People are having different troubles at any time, and it always shows that limit are set to be broken. Thing we learnt from uni differs from work, we aren’t getting the same resources and time. If you can build it that cost ten grand, your boss will ask you to finish it in seven. Sounds impossible but that’s how capital makes money from their employees. And the only way to get out of these is to slightly break these dummy code of conduct and build your way out. And that seems to be what most people do when they are in trouble. They are facing two side of either lose their jobs and position, or do a nothing-like code breaking without letting anyone but their own heart knows. Apparently, the second part looks much more easier and cheaper.

# Student Seminar Reflection Week4

This is the first week we having student seminar. It is so interesting that my classmates do presentation and do the job as the tutor. We have two topics in this week, which is Virtual Reality and Ethical Issues in Robotics. In this Virtual Reality student seminar, my classmates shown me a lot about it. If there are ethical issues happen, who can we blame to? Software, hardware, or the users themselves. It is hard for VR to distinguish and identify. Active real experience is a fundamental element within VR. Therefore, it is possible that a part of users can not tell the difference between real and virtual. We've learned a virtual killer robot case to understand the probability of ethical issues. Robots are well developed in many fields, they are good at doing boring, dangerous and dirty work. However, there are many potential ethical risk. Ensuring Health and safety of users are important and challenging issues for VR systems to avoid discomfort, harm or even injury. Developers should ensure that advancement in technology do not come at the expense of human well-being. When experiencing VR, the brain tends to work harder to integrate the unusual stimuli being presented to the different senses. Therefore, VR has power to affect the senses and brain of a user, leading to fatigue or sickness such as dizziness and nausea unlike any other simpler media. It is due to the problems in hardware, low-level software or carelessness of a VR developer who disregards the side effects of the experience on the user. Prolonged repetitive VR movements can lead to fatigue as the interference requires large amounts of muscular effort.

VR users has high chances of affecting their tissues. The HMDs and other visual displays are closely coupled with eyes can harm user’s eyes by the electromagnetic field (emf) and laser lights from VR systems if the exposure is prolonged. Even the poor adjustments of HMD can cause eye strains and head, neck and spine could be harmed by the weight or position of HMDs. Imbalance of body position due to VR systems could make the user fall or trip resulting bumps and bruises. There is high level of concern over the negative influences of interactive VR environments towards social implications. The users who are engage in violence VR video games and television in the virtual world may become desensitized to their their violent virtual actions and mimic that behavior in real world. There are other issues like people turning their backs on the real world and wander around the synthetic worlds that fulfill their whims. As of now, violence in VR is nearly inevitable but it is still important to address social issues before they result in crisis or harm.

# Student Seminar Reflection Week5

We had two interesting topics which are Facial Recognition and Hacktivism in this week's student seminar. Face recognition, as one of the most successful applications of image analysis, has recently gained significant attention. It is due to availability of feasible technologies, including mobile solutions. Although systems have been developed for face detection and tracking, reliable face recognition still offers a great challenge to computer vision and pattern recognition researchers. There are several reasons for recent increased interest in face recognition, including rising public concern for security, the need for identity verification in the digital world, face analysis and modelling techniques in multimedia data management and computer entertainment. When it comes to public safety, however, the technology has had a tentative roll-out. Only China has widely deployed facial recognition, which debuted in train stations during the Lunar New Year high season. Some nations, such as Japan, plan to use the technology for high profile occasions, like the Olympics or other major sporting events. There have been two major ethical concerns: development bias and facial recognition ethics of use.

In the former, facial recognition must be developed before it can be implemented. A major part of that development is deep learning, where the program perfects its mapping ability and positive identification tools by practicing on massive data sets. Unfortunately, many of these data sets are not diverse. They largely overrepresent Caucasian individuals as well as men, people without disabilities and middle-aged adults.

Consequently, facial recognition software can be faulty when mapping and matching faces of people of color, women and the elderly. The racial element is especially troubling, particularly in the United States. Black men and queer women of color are disproportionately imprisoned compared to other populations. An inaccurate facial recognition software has the potential to further that disparity; moreover, it could lead to a higher number of mistaken identities due to false matches.

# Student Seminar Reflection Week7

Today we talked through algorithm ethic and geoblocking.

We talked about some interesting scenarios. Case 1, a self driving car is going to crash on pedestrians otherwise the car will crash on road and kill its passenger inside. I believe that is a good question, AI making decisions has been a controversial topic since it was invented. And it’s very hard to tell whether its behaviour is ethical or unethical, also, we can hardly find out whom to be blamed in cases like this. The algorithm behind this demands high level of justification and judgement to decide is it developed well enough to get out of the responsibility loop. Case 2, insurance company using new algorithms to find out people with some characters are more likely to cause car accident, so the company decide to charge more on these people. People in my breakout room were having different opinions on this topic. While some thought it ethical because of fee charge balance, but some not – this behaviour could be considered as discrimination.

Geoblocking is technology that restricts access to Internet content based upon the user's geographical location. In a geo-blocking scheme, the user's location is determined using geolocation techniques, such as checking the user's IP address against a blacklist or whitelist, accounts, and measuring the end-to-end delay of a network connection to estimate the physical location of the user. The result of this check is used to determine whether the system will approve or deny access to the website or to particular content. The geolocation may also be used to modify the content provided, for example, the currency in which goods are quoted, the price or the range of goods that are available, besides other aspects. We talked about different issues in geoblocking, like vpns, price discriminations and album label staff.