

## **Technological context in the discourse of COVID-19.**

It is impossible to know when the situation in the world will get back to normal. It seems that things will never be the same as they were before the pandemic. However, more adoption of teleconferencing tools can be observed nowadays. Companies that worked onsite, companies that worked offsite, institutions, civil services and universities - all started to incorporate Internet collaboration in their business models in order to survive the pandemic. The number of online courses teaching how to conduct online courses and events mushroomed. It seems that the amount of people with teleconference literacy dramatically increased since the beginning of lockdowns. Moreover, more attention will be paid in the future to improving users' experience and the stability and quality of the Internet services.

Another consequence of understanding of the biological threat might be that wherever possible human labor will be replaced by machines, automation, or robots. More discoveries are to be anticipated in the area of medicine which will use computer technologies to improve methods, accuracy, and reduce costs of detection of diseases. Even today computers detect diabetic retinopathy from scanned images of human eyes and for sentencing of criminals (Weil, 2018).

As a technology integrator I understand that it is likely that Chinese surveillance models will be implemented all over the world within the context of smart cities. Data about citizens will likely be collected and their actions traced and scored as already happens in Chinese cities (Zhou, Xiao, 2020). Multiple cameras are being installed at roads, streets, shops, etc. Some of them calculate social distance and could give a warning when detecting noncompliance with social distancing regulations. More sophisticated solutions could recognize a person and incur an instantaneous charge to their bank account. Such solutions are already being implemented in cashierless shops and it is a matter of time when governments will decide to incorporate them to make the regime stronger.

For engineers like me the ethical issue concerning citizens' liberties is of low priority, as the main focus is rather in finding a way to implement this or that algorithm. Teams in India are rich in mathematicians and on an experimental basis they install with government support tiny cameras to record and analyze traffic and detect events. All over the world, developing computer vision algorithms has become a way to earn bread and butter for engineers who otherwise wouldn't have jobs. It is noticeable that venture capitalists and governments provide support to startups and engineers to develop more technological solutions for the public benefit.

I agree that scientists need to consider the pros and cons of possible outcomes of their work, as any technology or tool can be used both for good or for evil. However, in the phase of development of computer vision tools and gadgets this concern seems hardly

taken into consideration by engineers, at least until there is a consideration to release a product to the public. It seems that from the point of view of project management estimation of impact of releasing a product might need to be done by a separate department that doesn't necessarily include engineers that invent/improve this or that part of a complex system. Engineer workers might not have time to speculate if the specific mechanism that they are developing can be misused. Time is often a constraint. Moreover, the chance of technology misuse shouldn't prevent more sophisticated devices from being developed. I would rather consider that there exists internal motivation of inquisitive minds and external necessity, e.g., to make cities safer. It seems to be the motive that makes inventors construct improved and more sophisticated solutions for the common good.