1DV032 – Seminar

Environment and sustainability

From an ethical point of view of the environmental and sustainability aspect of Cloud Computing are good. If we can make use of this technology as much as possible it will be very good for our environment because we can lower the energy use and carbon emissions.

There are several factors in how we can lower the energy use, one of them are reducing wasted computing resources through better matching of server capacity with actual demand and utilizing advanced data center infrastructure designs that reduce power loss through improved cooling, power conditioning.

A problem that could arise with using Cloud Computing is that the data center for it uses energy from non-renewable energy sources. For example, using energy from coal.

Maybe to isolate data easier and make it also easier to delete it safely to ensure that when remove an instance the data will disappear forever. Maybe some laws like GDPR but for companies using their data on it.

https://www.researchgate.net/publication/317310468_The_Environmental_Benefits_of_Cloud_Computing

https://download.microsoft.com/download/A/F/F/AFFEB671-FA27-45CF-9373-0655247751CF/Cloud%20Computing%20and%20Sustainability%20-%20Whitepaper%20-%20Nov%202010.pdf

The rise of the artificial intelligence

Processes in AI such as machine learning and deep learning often make intensive demands on processing, storage and power consumption and that could help using Cloud Computing to rapidly increase the capacity of those when needed.

Threats could be that storing that vast amount of data on a Cloud could be dangerous because of loss of control and the dependence on the Cloud Computing provider.

Ethical responsibilities could be to not make certain AI services available to run that has the goal to harm.

https://www.intel.com/content/dam/www/public/us/en/documents/guides/artificial-intelligence-eguide.pdf

Cloud computing and the data – Privacy and personal integrity

It's not so clear who owns the data on a Cloud Platform. It really depends on the provider what terms they have, what laws that is used and also if you have written corporate policies that is acknowledged by employees and vendors that they are not giving up the rights to the data or intellectual property.

The problems that could occur if we don't have control over our own data is that it could get into wrong hands. Someone could get sensitive data such as credit card numbers, personal numbers etc.

GDPR in Cloud Computing regulates how businesses collect, use and storing personal data. If the businesses do not comply with its requirements, they will get fines. I think that is good because then they will be forced to fix this seriously because of the big fines they will get if they don't.

If someone is saying "Well I do not care about digital privacy – I have nothing to hide!" they are not realizing what could happen with that data and probably not what other data that has been already collected from the user. If there is some exploit by a hacker and get access to that information, they can use it for bad purposes. So, I do not agree. Everyone should be interested about their personal information, how its stored and what risks that involves.

https://winningtech.com/who-actually-owns-your-data/

https://cloud.google.com/security/gdpr/

Future of Cloud Computing

https://cloud.google.com/blog/topics/research/future-of-cloud-computing-5-insights-from-new-global-research