

Unit 3

Emerging Trends in Computer Science

This week's consideration focused on relevant **trends** found in Computer Science which students must show an awareness of, such as *big data*, *cloud computing*, *social media*, *artificial intelligence* and *virtual machines*. Of these emerging trends listed, I find that artificial intelligence is the single most disruptive trend today.

Collaborative Discussion Summary

Summarising my engagement in the discussion form and my research, I garnered a broader understanding of the importance of GDPR and a relevant code of conduct as shown in the following points:

1. **Intention** and **culpability** is consideration when judges consider various crimes. (Rosenzweig, 2013). I linked this to the idea that GDPR fines must also be based on *intention* (GDPR, 2021)
2. **Responsibility**. I considered *who* bears responsibility for creating governing policies within an organisation and conclude management tasked specifically are responsible.
3. **Data privacy** is of particular concern to big tech companies like Apple, Microsoft and Google which I believe is driven by the **popularity of GDPR**. Supporting references include EU_1 (ND), EU_1 (2019), EU_2 (ND)
4. **Frameworks**. I raised with a fellow architect the role of COBIT and ITIL frameworks when adopting GDPR policies. This discussion was in light of corporate governance and how, as architects, we can ensure the application and security of clients' data, especially when utilising the TOGAF framework. References include ALC (2021), Jonny (2019), Karczewska (2017) and TheOpenGroup (2020).

5. **Emerging technologies** such as big data and cloud computing were discussed since these technologies enable big tech to more easily gain access to people's (private) data. From this access stems the absolute need for data governance and associated policies.
6. In the context of **data privacy**, I raised with a fellow architect a question about *who* is responsible for classifying data as "sensitive". I referred to Marin and Kung (2018) for an idea of *when* such data classification should take place. Also referenced is Sigera (2021).

I also considered the three roles of GDPR: data controllers, processors and protection officers (Metric, 2017) and asked in the discussion which role bears responsibility for data classification. The conclusion is that this responsibility lies with the data protection office.

7. I considered how ISO has a similar data privacy standard to Europe's GDPR policy (Std_BS, 2018) and (Std_Iso, 2021). This I believe is excellent as it allows organisations to start with *something* rather than nothing, when it comes to paying attention to data privacy.
8. A fellow architect mentioned that implementing GDPR policy reduced velocity due to the need to obfuscate sensitive customer data. However, I feel this is a mute point since GDPR policy mandates **anonymised data** EU_1 (2016).
9. I researched the information of **Data Protection Impact Assessments** to identify risks related to data privacy (Felz, 2018).

References

- ALC, (2021) Knowledge to secure your business: Governance. Available from <https://www.alctraining.com.au/governance-risk-security/> [Accessed on 11 February 2021]
- EU_1, (2016) Directive (EU) 2016/680. Available from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2016.119.01.0089.01.ENG&toc=OJ%3AL%3A2016%3A119%3ATOC [Accessed 02 February 2021]
- EU_1, (ND.) Adequacy Decisions. Available from https://ec.europa.eu/info/law/law-topic/data-protection/international-dimension-data-protection/adequacy-decisions_en [Accessed 02 February 2021]

- EU_1. (2019) What happens to personal data transferred from the EU to Japan. [pdf] Available from
https://ec.europa.eu/info/sites/info/files/research_and_innovation/law_and_regulations/documents/adequacy-japan-factsheet_en.pdf [Accessed on 02 February 2021]
- EU_2 (ND.) Adequacy decisions Available from https://ec.europa.eu/info/law/law-topic/data-protection/international-dimension-data-protection/adequacy-decisions_en [Accessed on 02 February 2021]
- Felz, D. (2018) German DPAs Issue DPIA Blacklists -Many Companies Likely to be Affected. Available at <https://www.alstonprivacy.com/german-dpas-issue-dpia-blacklists-many-companies-likely-to-be-affected/> [Accessed 02 February 2021]
- GDPR (2021) What are the GDPR fines? Available from <https://gdpr.eu/fines/> [Accessed on 11 February 2021]
- Jonny, (2019) Cyber Security Frameworks and Integrated with TOGAF. Available from <https://www.51sec.org/2019/01/08/cyber-security-frameworks-and-integrated-with-togaf/> [Accessed on 11 February 2021]
- Karczewska, J. (2017) COBIT 5 and the GDPR. Available from <https://www.isaca.org/resources/news-and-trends/industry-news/2017/cobit-5-and-the-gdpr> [Accessed on 11 February 2021]
- Martin, Y. & Kung, A. (2018) Methods and Tools for GDPR Compliance Through Privacy and Data Protection Engineering. 2018 IEEE European Symposium on Security and Privacy Workshops 108-111. DOI: <https://doi.org/10.1109/EuroSPW.2018.00021>
- Metric. (2017) Decoding GDPR Roles and Responsibilities [pdf] Available from https://www.linq.it/wp-content/uploads/Decoding_GDPR_Roles_and_Responsibilities.pdf [Access 02 February 2021]
- Rosenzweig, P. (2013) Ignorance of the Law Is No Excuse, But It Is Reality Available from <https://www.heritage.org/crime-and-justice/report/ignorance-the-law-no-excuse-it-reality> [Accessed on 11 February 2021]

Sigera, S. (2021) Launching into Computer Science Discussion Forum: Post (4). Available from: <https://www.my-course.co.uk/mod/hsuforum/discuss.php?d=240281> [Accessed 06 February 2021]

Std_BS, (2018) BS 10012 2017 + A1 2018 Standard. Available from <https://www.itgovernance.co.uk/shop/product/bs-10012-2017-a1-2018-standard> [Accessed on 02 February 2021]

Std_Iso, (2021) The international standard for privacy information management. Available from <https://www.itgovernance.co.uk/iso-27701> [Access on 02 February 2021]

TheOpenGroup, (2020) Architecture Governance. Available from <https://pubs.opengroup.org/architecture/togaf8-doc/arch/chap26.html> [Accessed on 11 February 2021]