Case Study: Inverse Transparency in Practice

Master's Thesis

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Context

Today's workplaces are increasingly digitalized, meaning work can be tracked and managed via digital tools. These tools generate data that can be useful for analytics and management purposes. Yet, unfettered access to these data leads to risks for individuals and privacy concerns. Recent data protection legislation tries to tackle these issues, but it is inadequate.

The idea of *inverse transparency* [1, 2] is to improve upon existing data protection by giving individuals more oversight how their data are used. Its core principle is to enable access to data on a more case-by-case basis, but to monitor all accesses and make them transparent to data owners. On the one hand, this can help to raise awareness of data usages and better protect the employee's personal data, on the other hand it may enable sensible and useful analytics.

Goal

The goal of this thesis is to apply the principle of inverse transparency in practice in a case study. That encompasses: (1) Research on the status quo at the industry partner w.r.t. workforce analytics and available data. (2) Conceptualization of analytics tools that are tailored to concrete problems of the industry partner. (3) Implementation of exemplary analytics tools with inverse transparency by design, integrated into the inverse transparency toolchain. (4) Conduct of the case study at the industry partner (see below).

The case study can be designed in various ways, depending on availability of resources. One option is to let a set of employees work with the developed analytics tools (see 2–3) in their daily work and conduct qualitative interviews for analysis. Another option could be focus sessions in the style of a vignette study, letting employees work with the developed tools in a guided environment and following up with questions. Other study designs are possible after consultation with the advisor. Please be aware of some typical misunderstandings about case studies (see [3, 4]).

Prerequisites and Application

This topic requires you to have an industry contact – either through an existing working relationship (working student etc.) or otherwise. You need to be able to conduct the case study described above with your industry partner and have the buy-in from their side.

Apply via email and include your relevant previous experience, which industry partner you work with, and contact details of the supervisor from the side of your industry partner. Attach to the email a tabular CV, grade report, and any previous scientific works you have written (seminar papers, bachelor's thesis, ...).

References

[1] Zieglmeier, Valentin, and Alexander Pretschner (2021). "Trustworthy Transparency by Design." arXiv preprint arXiv:2103.10769. Available: https://arxiv.org/pdf/2103.10769

[2] Zieglmeier, Valentin, and Gabriel Loyola Daiqui (2021). "GDPR-Compliant Use of Blockchain for Secure Usage Logs." In EASE 2021: Evaluation and Assessment in Software Engineering, ACM (pp. 313–320). Available: https://arxiv.org/abs/2104.09971

[3] Wohlin, Claes (2021). "Case Study Research in Software Engineering—It is a Case, and it is a Study, but is it a Case Study?" In Information and Software Technology 133, Elsevier (no. 106514). Available: https://www.wohlin.eu/ist21a.pdf

[4] Flyvbjerg, Bent (2006). "Five misunderstandings about case-study research." Qualitative inquiry 12.2 (pp. 219-245). Available: https://arxiv.org/pdf/1304.1186.pdf