Seminar: Inverse Transparency
Introductory Meeting

Valentin Zieglmeyer | zieglm+sit@in.tum.de
Chair for Software and Systems Engineering

7\textsuperscript{th} July 2020
Data hogs in our lives

You: “Just use something else!”
Other people: “But it’s so useful... ;_;”
Data hogs at our employers

Theory
Managers mustn’t misuse personally identifiable information about their employees.

Reality
Burden of proof: Employee

“I didn’t fire you because of your performance data…”

Source: Welt
Inverse Transparency – The concept

What is Inverse Transparency?
In short: A new approach to data privacy.
▶ Grant full access to personal data to everyone, *but*...
▶ ...make all data usages visible (transparent).

Why Inverse Transparency?
▶ Misusage happens – we can try to make it unattractive
▶ At the same time allow legitimate and interesting data usages
Seminar topics (selection)

Maintaining data privacy on access
- Differential privacy on data access: Privacy without modifying the data at rest
- Sensible thresholds for data accesses based on k-anonymity, l-diversity, and t-closeness

Managing and representing data accesses
- Maintaining understandability when representing data accesses
- Representations and appropriate simplifications of data access requests

Creating data analysis plugins
- Sensible metrics for individual’s performance based on ITS data
- Finding and visualizing experts and their skills for an ITS expert search plugin

Secure logging
- A SGX-based secure logging framework
- Maintaining confidentiality when logging multi-owner data accesses
Seminar topics: A note

- Additional topics will arise
- You may also suggest fitting topics
What you will learn

► Literature topics
  ▶ Conducting a literature review
  ▶ Summarizing and classifying literature

► Implementation topics
  ▶ Grounding your implementations in science
  ▶ Empirically evaluating your software

► Writing a scientific paper

► Peer reviewing

► Presenting your results
Administrative (1/2)

► Bachelor’s and Master’s seminar
► Two seminar meetings over the course of the semester
  ► Kick-off, Intermediate meeting
► Seminar itself (presentation session) is held in a block of 1–2 days
► Dates will be announced in a timely manner
  ► Meetings at beginning and middle of the semester
  ► Presentations most likely in the last weeks
Administrative (2/2): Application

- Registration via https://matching.in.tum.de/
- Apply via our application form (link on the seminar homepage) to get prioritized

Seminar homepage:
https://www.in.tum.de/i04/teaching/seminar-inverse-transparency/

Application form:
https://wiki.tum.de/display/i4students/Application+for+Seminar+Inverse+Transparency

http://go.tum.de/364641

http://go.tum.de/105091
<table>
<thead>
<tr>
<th>Title</th>
<th>Preliminary meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>✪ Software Quality</td>
<td>tomorrow, 08.07., 10:00</td>
</tr>
<tr>
<td>NLP for Software Engineering</td>
<td>tomorrow, 08.07., 13:00</td>
</tr>
<tr>
<td>Opening the Black Box – Trends in explainable AI</td>
<td>tomorrow, 08.07., 14:00</td>
</tr>
<tr>
<td>Recent advances in Computer Systems</td>
<td>was this morning</td>
</tr>
</tbody>
</table>

*Our premier seminar!*