



Responsible Data Science 2024: examination

The grade is based on

- a **presentation of 15-20 min incl. handout** (30% of the grade). The presentations will each address one specific literature piece and related ethical issues.
- a **written analysis of an ethical dilemma and possible solutions of 6 pages per person** (70% of the grade). The paper should apply VSD-based methods and discuss the ethical issues covered by the course. Students are also invited to submit (longer) papers developed in a group of two (12 pages).



Indications for presentation

- 15-20 min. for one person / 30 min. for two persons
- Focusing on one piece of literature (see xls-table)
- Content of the presentation
 - Context of the author and paper
 - Main ideas of the paper
 - Critique of the arguments
 - Links to further readings
- Propose questions for the discussion
(and send it to lecturer in advance)
- Handout (2 pages / 800 words text per person)

Indications for paper abstract

- 6 pages per person, with the option of developing a paper in a group of two students ()
- Address one ethical dilemma in an application area of AI or data engineering using the concepts and methods learned in the seminar.



Indications for paper abstract

- Develop an abstract (300 words) for your seminar paper, incl.
 - Specify author (one or group of two)
 - Motivation
 - Use case (technology and application field)
 - Main topic (ethical issue)
 - Methods (e.g. stakeholder and risk mapping, scenario techniques)
- Send the abstract to the lecturer until the evening of 17.06.24

Your abstract will be shared with another student who will develop a critical review of your ideas. The lecturer will also comment on the abstracts and we will discuss and develop them further in the last seminar session on 26.6.



Indications for full paper I: content

- The study and paper should generally embrace the approach of value-sensitive design (VSD) conceptualized in Friedman 1996; Friedman et al. 2019.
- Discuss the relevant literature and topics introduced in the course.
- The study for the paper should
 - o include the analysis of an existing AI application field by means of VSD-compatible methods (e.g. identification of value tensions, stakeholder and/or risk mapping);
 - o identify and discuss one major ethical value or value tension in the field in detail;
 - o develop the scenario of a value-sensitive AI system in the application field by building on methods introduced in the course (scenario-based design, value scenario).
 - o Variations from this form are possible but must be discussed with the lecturer.



Indications for full paper I: format

- Students may submit individual papers or papers in groups of two persons
- Paper length: 6 pages per person (2300 words, with an accepted deviation of +/- 10 %) / 12 pages for groups of two persons
- The paper may include one visualization (stakeholder mapping or similar) or table.
- Orientate yourself towards common structures of research papers (abstract / introduction and research question / related work / theory and methods / analysis / further discussion / conclusion and outlook / bibliography).
- For layouting, use LaTeX or overleaf with one the following templates:
<https://www.overleaf.com/latex/templates/acm-conference-proceedings-primary-article-template/wbvngghjbzwpc>
<https://www.acm.org/publications/proceedings-template>



Indications for use of AI in the course

- We will occasionally use GenAI for brainstorming, gather information on theories and approaches and to generate and discuss ethical dilemma;
- While you are encouraged to use Generative AI applications (ChatGPT, Gemini, Midjourney, etc.) for the production of the paper (text and/or visualizations) while adhering to the following rules:
 - Use of AI has to be documented on a transparency sheet, whose form may be inspired by the literature addressed in the course (i.e. Data Sheets, Model and System Cards).
 - The transparency sheet has to specify a) what kind of AI has been used b) in what ways to c) produce which exact element of the study and/or paper.
 - An evaluation of the transparency sheet will also feed into your course grade.