IN5620 Individual assignment fall 2022 – module 2

Updated Sept. 27, 2022

This document presents the individual assignment for Module 2, which should be added to the individual assignment of Module 1.

Second module - and second iteration

For the individual assignment, there are three topics:

- Characteristics of AI-infused systems.
- Human-AI interaction design.
- Chatbots / conversational user interfaces.

Below, the writing task for these three topics is described.

Characteristics of AI-infused systems

AI-infused systems are ' systems that have features harnessing AI capabilities that are directly exposed to the end user' (Amershi et al., 2019).

Identify and describe key characteristics of AI-infused systems. Draw on the first lecture of Module 2 and three of the mandatory articles (Amershi et al. (2019), Kocielnik et al. (2019), Yang et al., (2020)).

Identify one AI-infused system which you know well, that exemplifies some of the above key characteristics. Discuss the implications of these characteristics for the example system, in particular how users are affected by these characteristics.

Human-AI interaction design

Amershi et al. (2019) and Kocielnik et al. (2019) discuss interaction design for AI-infused systems. Summarize main take-aways from the two papers.

Select two of the design guidelines in Amershi et al. (2019). Discuss how the AI-infused system you used as example in the previous task adheres to, or deviates from, these two design guidelines. Briefly discuss whether/how these two design guidelines could inspire improvements in the example system.

Bender et al. (2021) conduct a critical discussion of a specific type of AI-infused systems – those based on large language models. Summarize their argument concerning problematic aspects of textual content and solutions based on large langue models.

Chatbots / conversational user interfaces

Chatbots are one type of AI-infused systems. Based on the lectures, and the mandatory articles, discuss key challenges in the design of chatbots / conversational user interfaces.

Revisit Guidelines G1 and G2 in Amershi et al. (2019). Discuss how adherence to these could possibly resolve some of the challenges in current chatbots / conversational user interfaces. Optionally, you may read Følstad & Brandtzaeg (2017), Luger & Sellen (2016), and Hall (2018) from the optional literature to complement your basis for answering.

Practical information

Date of delivery: November 2.

Deliver the interim report the same way as you delivered the wonder document.

Language: Of your choice, English or Norwegian.

Maximum number of pages for Module 2 content: 6

Make references to articles: Minimum 4.

Feedback

Feedback to another student is to be given one week after the delivery deadline.

Use the "two stars and a wish" structure for the feedback. Try to be specific about what can be improved with the text.

What to “do” with the feedback?

In the next iteration of the individual assignment, make an appendix where you briefly describe what you have done with the feedback that you received.

References

Amershi, S., Weld, D., Vorvoreanu, M., Fourney, A., Nushi, B., Collisson, P., ... & Teevan, J. (2019). Guidelines for human-AI interaction. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (paper no. 3). ACM. (https://www.microsoft.com/en-us/research/uploads/prod/2019/01/Guidelines-for-Human-AI-Interaction-camera-ready.pdf)

Bender, E. M., Gebru, T., McMillan-Major, A., & Mitchell, M. (2021). On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?. In Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency (pp. 610-623). ACM. (https://dl.acm.org/doi/pdf/10.1145/3442188.3445922)

Kocielnik, R., Amershi, S., & Bennett, P. N. (2019). Will You Accept an Imperfect AI?: Exploring Designs for Adjusting End-user Expectations of AI Systems. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (paper no. 411). ACM. (https://www.microsoft.com/en-us/research/uploads/prod/2019/01/chi19_kocielnik_et_al.pdf)

Yang, Q., Steinfeld, A., Rosé, C., & Zimmerman, J. (2020). Re-examining Whether, Why, and How Human-AI Interaction Is Uniquely Difficult to Design. In Proceedings of the 2020 CHI conference on human factors in computing systems (Paper no. 164). (https://dl.acm.org/doi/abs/10.1145/3313831.3376301)

Følstad, A., & Brandtzæg, P. B. (2017). Chatbots and the new world of HCI. interactions, 24(4), 38-42. (https://dl.acm.org/citation.cfm?id=3085558)

Luger, E., & Sellen, A. (2016). Like having a really bad PA: the gulf between user expectation and experience of conversational agents. In Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (pp. 5286-5297). ACM. (https://www.microsoft.com/en-us/research/wp-content/uploads/2016/08/p5286-luger.pdf)

Hall, E. (2018). Conversational design. A Book Apart (https://abookapart.com/products/conversational-design)