Human-Centered Design and Evaluation of Digitized Cultural Heritage Experiences

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What do we mean with the term Human-Centered Design?
Why is it important to embrace human-factors in digital cultural heritage experiences?
In cultural heritage, **human factors** is dedicated to better understanding **how humans can effective and efficiently process and comprehend information integrated with the technology**.
How can we practically consider human-factors in digital cultural heritage experiences?
Eye-Gaze Driven Research Model

Research Model

Eye Gaze-driven Cognition-centered Modelling Approach

Research questions

- Do human cognitive differences correlate with visual behavior within cultural heritage interaction contexts?

In case of a strong correlation:

- Does human cognitive differences affect interaction behavior and / or knowledge acquisition within cultural heritage interaction contexts?
- Can we create in run-time efficiently and effective cognition-centered user models?
Do human cognitive differences correlate with visual behavior?

HoloTour is a playful audiovisual three-dimensional virtual tourism application

Heatmaps of (a) field-independent and (b) field-independent in the mixed-reality environment. Field-independent individuals visually explored larger areas of field-dependent players (HoloTour is a playful audiovisual three-dimensional virtual tourism application developed by Microsoft.)

Effectiveness and efficiency in classification experiments

In another domain: Graphical User Authentication

Finishing up

Cultural heritage digitized content is processed on a **cognitive level by end-users**.

**Human cognitive characteristics** as an important human factor in the design of cultural heritage interactive systems.

Personalize the visual and interaction design to the individuals’ preferred cognitive processing characteristics.
thank you for your attention questions?

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