



Exploring Data Physicalization for Understanding of Environmental Data

Background

The field of Sustainable Human-Computer Interaction (SHCI) frequently addresses issues of lacking awareness about environmental issues in everyday life. Data physicalization transforms digital data into tangible objects, making complex information intuitively understandable through physical interaction. This innovative approach extends beyond traditional visualizations by engaging multiple senses, allowing users to touch, see, and sometimes hear or smell data. Such physical representations enhance comprehension, engagement, and accessibility, making data more relatable and easier to grasp for a wider audience, including those with visual impairments.

Approach

Based on an initial analysis of existing data physicalization approaches and the design dimensions they leverage, thus far unexplored methods for data physicalization should systematically be explored. To do so, a hardware prototype is implemented based on the initial analysis and evaluated in a user study.

Based on Bachelor or Master level the scope of the thesis is adapted.

Contact



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Focus in this project

Hardware/Software Prototype
Research-through-Design
User Evaluation