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Visualisation tool for Enhancing Public Engagement Using Supermarket Loyalty Card Data

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Introduction & Background

One of the main challenges in the field of digital footprints is bridging the communication gap between researchers and the public, whose participation in sharing transaction data is essential. To address this, we have created an engaging data visualisation tool that demonstrates the value of loyalty card data, with the aim for this to be developed into a public facing application, sparking awareness and discussions around research using digital footprint data for public good.

Objectives & Approach

This visualization project emerged from a long-standing collaboration with We The Curious science centre in Bristol, UK, which hosted an interactive shopping experience within the Open City Lab. The exhibition sparked public discussions about data donation for the public good. Feedback from the exhibition revealed that many people were unaware they could access their personal data and did not understand its potential value for public health research. We developed the first prototype tool using Streamlit, a python-based package and included four main themes of aggregated data based on these discussions with the public (Spending, Location, Product Categories and Price Changes).

Relevance to Digital Footprints

This application showcases the power of digital footprint data in an interactive and interpretable way for members of the public. This is vital for future digital footprint research as the public's data is essential for ongoing research into public health.

Results

Following the creation of the initial prototype, a workshop was hosted with 10 participants. During the two-hour session, participants provided feedback on the application, and a 'Data Hazards Workshop' was conducted. The main feedback

was collected through a structured questionnaire. The questionnaire results indicated that the overall user experience was very high, though improvements could be made by improving the overall navigation of individual graphs. All feedback gained throughout this workshop and the conference will be implemented into the future version of the application.

Conclusions & Implications

Our future aim is to continue to develop the utility of this tool and make it more widely accessible, to enhance public understanding, build trust, and foster ongoing participation in sharing shopping data for health research.

Keywords

Data Visualisation, Public Outreach, Public Engagement, Loyalty Card Data, Digital Footprints

