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Abstract Title: Using augmented reality to inform environmental decision making
Abstract Text:
Augmented reality applications, wherein digital information is added to the physical world, can be used to provide environmental information in a personalized, timely and contextually relevant manner. This is particularly relevant given that consumers and policy makers are demanding more information about the environmental impact associated with the goods and services they use. To explore the potential of augmented reality in this setting, we developed a shopping app that overlays product specific information and carbon footprint data on a smartphone's video stream. Various display methods were pilot tested using online survey tools. The final app was then tested at a major supermarket. Participants first took a preference-elicitation survey from which an individualized multi-attribute utility model was constructed. The model was used to tailor the displays seen during the experiment. Individuals saw personalized letter grades when viewing products from a distance, and then tailored detailed information on nearby products. Bottled water and breakfast cereal were tested, with participants randomly assigned to each category and compared to a control group that faced the same choice situation but without the app. Large carbon reductions were measured for the bottled water but small changes for cereal. However, large nutrition changes for cereal were also measured, indicating that individuals on average valued health effects above environmental benefits in this setting.