Human-Computer Interaction Research Opportunities for Aging In Place

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Lots of *data* collection devices
Opportunity: Make Data Actionable

Value

Data

• Collecting and Interpreting

Information

• Sensemaking

Knowledge

• Decision making
Most of what we get is data
Issue: Data is a proxy
Opportunity: New interfaces

Support sensemaking and decision making - not just data consumers, but really in control - hypothesis generation and testing - personalized decision support tools

Make it easier to consume information and take action.
Opportunity: Trustworthy Interfaces

As algorithm or problem complexity increases, how do you develop trust in such systems?

- Intelligible systems
- Reputable systems
- Predictable systems
Opportunity: Intention-Aware Interfaces

Need new user interfaces
- for control/actuation
Opportunity: Intention-Aware Interfaces

Need new user interfaces
- for control/actuation
Opportunity: Detection ➔ Prediction
Opportunity: Detection $\rightarrow$ Prediction
Opportunity/Challenge: Value Proposition

Compelling apps really need data from a time when people are not compelled by these apps.

- algorithms need an understanding of what is “baseline behavior” for an individual and that this is dynamic.
Opportunities: Roles

Technology often disrupts social balance

- Privacy
- Maintain level of independence
- Maintain identity

Concepts of roles:

- caregiver and elderly
- monitor and person being monitored

Maintain levels of independence.