

## 1. Introduction

**AIM:** To understand the potential of AI in public and non-profit agencies, focusing on a national scale

**GOAL:** To create a guide linking work in homeless services (“Work Values”) with values used in making AI (“AI Values”). This will help in building AI systems that match the values of these organizations.

## 2. Background

- Instruments developed to capture human values (e.g. Schwartz Values Survey, World Values Survey)
- Methods translating human values into the design of technologies (e.g. Value Sensitive Design by Friedman et al.)

**RQ:** How should human values inform the design of AI-based systems for social service provision for people experiencing homelessness?

## 3. Methods

**METHOD:** Survey (05-06/2023)

**PARTICIPANTS:** U.S. public and nonprofit agencies addressing homelessness, funded by HUD; 207 unique, valid responses

**MATERIAL:**

1. Organization
2. Work Values
3. AI Values
4. Demographic

How important are the following values for an AI system to improve services for people who are experiencing homelessness? Please choose in the scale of (1) **Not at all** to (5) **Extremely**.

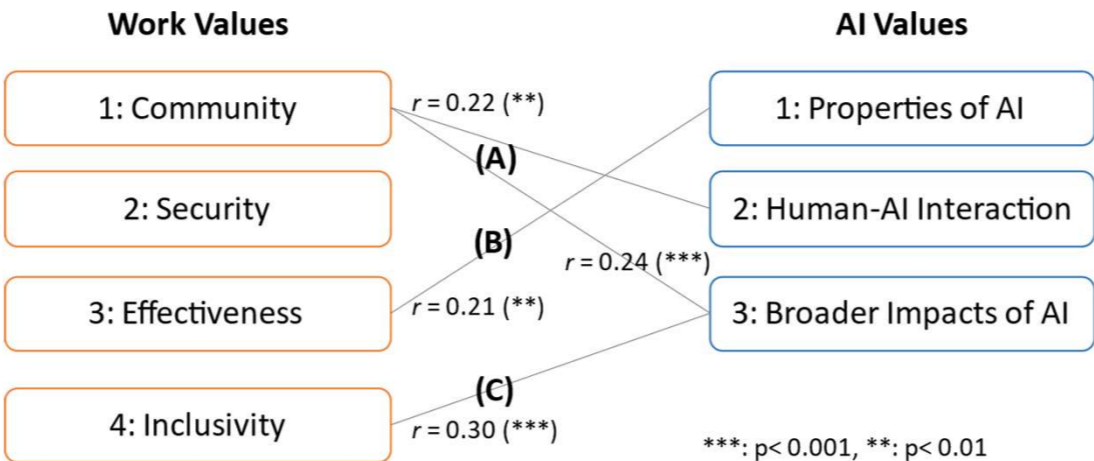
	Importance				
	Not at all <--> Extremely				
	(1)	(2)	(3)	(4)	(5)
The AI tool should be easy to use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The AI should be simple	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The AI should keep data private	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The AI should prioritize keeping people safe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The AI should provide consistent results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I should be able to trust the AI	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I should be able to understand how the AI works	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## 4. Analysis and Results

**STEP 1:** Conduct Factor Analysis to cluster Work Values and AI Values into groups

Work Values: 12 Values → 4 Groups				AI Values: 15 Values → 3 Groups		
1: Community	2: Security	3: Efficiency	4: Equity	1: Properties of AI	2: Human-AI Interaction	3: Broader Impact of AI
Community Collaboration Trust Care Well-being	Security Safety Privacy	Effectiveness Efficiency	Inclusivity Equity	Accuracy Consistency Security Robustness Effectiveness Privacy Efficiency	Simplicity Usability Explainability	Equity Care Representativeness Safety Trust

**STEP 2:** Calculate Factor Scores for each participant across Work Values and AI values, then perform correlation analysis between the factor scores of both domains.



### Implications

- A)** There is need for AI designs that are not only efficient but are also cognizant of broader *community* welfare and harmony.
- B)** Individuals who value *effectiveness/efficiency* expect AI systems to possess such qualities. Thus, ensuring AI’s *robustness, accuracy, and consistency* is the priority in such cases.
- C)** Societal consciousness growing around the *equity* and *inclusivity* implications of AI (e.g. bias, representation).

## 5. Discussion

- AI design, development, and deployment should align with individual and communal values, with AI adoption, trust, and societal integration relying on both technical and ethical aspects
- Our results validate the essential theories of VSD and push their boundaries, suggesting that future AI designs should be attuned not only to generic human values but also to the nuanced interplay between Work Values and AI values
- Implications for policy formation: need for collaborations between developers and organizations

## 6. Conclusion

- Our data demonstrates that work values can inform the design of AI-based systems
- Further research: Incorporating qualitative data; delving into specific scenarios of AI application

### REFERENCES

Schwartz, S. H.: Are there universal aspects in the structure and contents of human values? *Journal of Social Issues*, 50(4), 19-45 (1994)

World Values Survey Homepage, <https://www.worldvaluessurvey.org/wvs.jsp>

Friedman, B., Kahn, P. H., Jr., Borning, A.: Value sensitive design and information systems. In Zhang, P., Galletta, D. (eds.) *Human-computer interaction in management information systems: Foundations* pp. 348-372. New York: M. E. Sharpe. (2006)

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