

HUMAN-CENTERED AI

by Ben Shneiderman

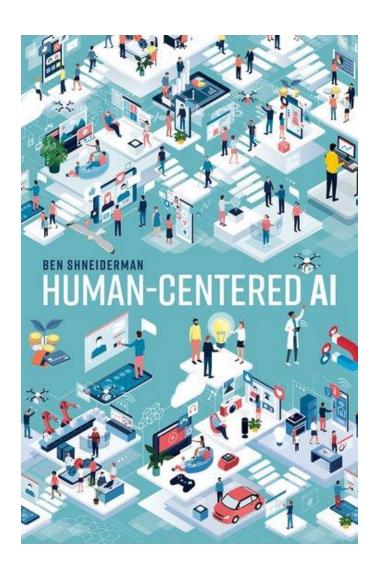


Dr. Bernd Neumayr

Institut für Wirtschaftsinformatik – Data & Knowledge Engineering

HUMAN-CENTERED AI





Ben Shneiderman. *Human-Centered AI*. Oxford University Press, 2022.

Vortrag von Ben Shneiderman:

https://youtu.be/o5XwczIERvM

Website:

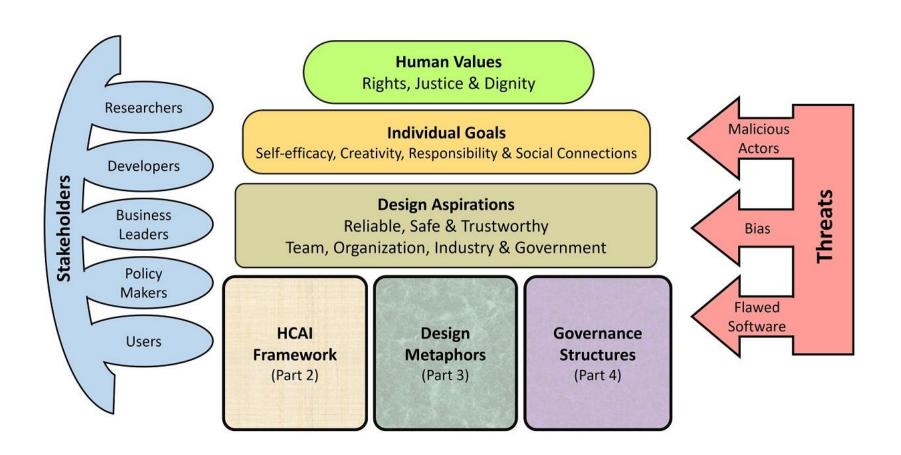
https://hcil.umd.edu/human-centered-ai/



HUMANS IN THE GROUP COMPUTERS IN THE LOOP

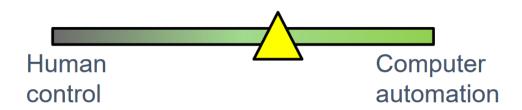
WHAT IS HUMAN-CENTERED ARTIFICIAL INTELLIGENCE?





Quelle: https://iui.acm.org/2021/images/HCAI-IUI-Part%201-Shneiderman-4-13-2021-v2.pdf





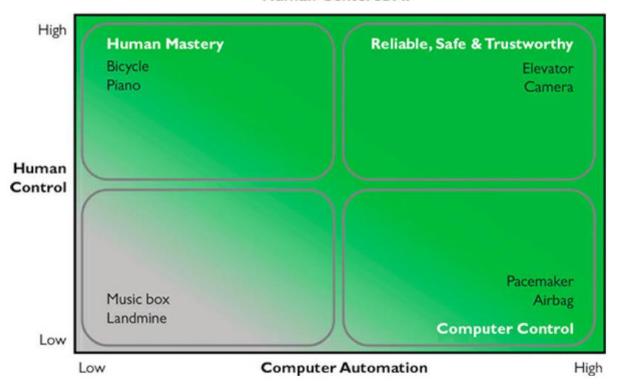
Misleading one-dimensional thinking suggests that designers must choose between human control and computer automation





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Human-Centered Al



Two-dimensional framework with the goal of reliable, safe, and trustworthy designs, which are achieved by a high level of human control and a high level of computer automation

DESIGN METAPHORS



Science Goal

Innovation Goal

Intelligent Agents

Thinking Machine, Cognitive Actor,
Artificial Intelligence, Knowledgeable

Teammates

Co-active Collaborator, Colleague, Helpful Partner, Smart Co-worker

Assured Autonomy

Independent, Self-directed, Goal-setting, Self-monitored

Social Robots

Anthropomorphic, Humanoid, Android, Bionic, Bio-inspired

Supertools

Extend Abilities, Empower Users, Enhance Human Performance

Tele-operated Devices

Steerable Instrument, Powerful Prosthetic, Boost Human Perceptual & Motor Skills

Supervised Autonomy

Human Control & Oversight,
Situation Awareness, Predictable Actions

Active Appliances

Consumer-oriented, Wide Use, Low Cost Comprehensible Control Panels

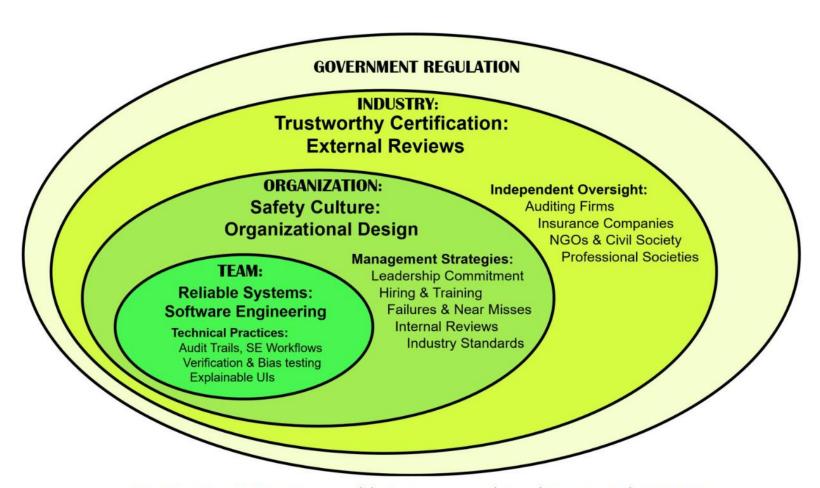
Active Appliances

Quelle: https://iui.acm.org/2021/images/HCAI-IUI-Part%201-Shneiderman-4-13-2021-v2.pdf

Combined Designs

GOVERNANCE STRUCTURES





ACM TIIS (Oct 2020) https://dl.acm.org/doi/10.1145/3419764

https://iui.acm.org/2021/images/HCAI-IUI-Part%202-Shneiderman-4-13-2021-v2.pdf