Human-AI Interaction

Course number: INF 385T
Unique ID: 27650
Time: 3pm-6pm Mondays
Location: UTA 1.204

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Office hours: Via email and by appointment

Description
Advances in artificial intelligence (AI) have changed the way decisions are made in organizations, governments, and everyday life. This course will provide an introduction to combining human and machine intelligence to benefit people and society. Students will learn cutting-edge research on a number of topics related to human-AI interaction, including the psychological and societal impacts of AI, AI biases and fairness, transparency and explainability, mixed-initiative interaction, human-in-the-loop decision-making, embodied and natural language based AI, and design guidelines and methods for AI user experiences. These topics will be explored in the context of real-world applications, including online social media and labor platforms, algorithmic management tools for worker hiring and evaluation, and decision-support tools for public administrative decisions on risk assessment and resource distribution. Students will form interdisciplinary teams and learn through projects how to critically analyze existing AI systems, study their human impact, and design new systems to be human-centered.

Note: This course is about human-centric theories and methods for envisioning AI systems and will provide no technical insight on machine learning, data-mining, or statistical pattern recognition. Prior experience with programming, AI/machine learning, human-computer interaction or interaction design, or user research is not required but will be helpful. The methodological skills required for projects will be covered in the class.

Schedule

Week	Date	Topic
Week 1	1/27	Introduction
Week 2	2/3	Perspectives on human-AI interaction

Week 3	2/10	Human experiences with AI in platforms, workplaces, and cities
Week 4	2/17	Designing AI user experiences
Week 5	2/24	Transparent and explainable AI
Week 6	3/2	Fair and responsible AI
Week 7	3/9	Designing AI with stakeholders
Week 8	3/16	Spring break
Week 9	3/23	Human-in-the-loop systems and human-AI collaboration
Week 10	3/30	Data and knowledge
Week 11	4/6	Designing for failure
Week 12	4/13	NLP-based AI: Chatbots and voice agents
Week 13	4/20	Embodied AI: Robots and self-driving cars
Week 14	4/27	Work session / guest lecture
Week 15	5/4	Final Presentations

Assignments & Grading

Attendance & active participation (10%)
Reading reflections (15%)
In-class reading panel participation (15%)
Projects (60%)

Part 1. Understanding experiences with AI (30%)

Background literature survey
Problem formulation
Data collection
Analysis
Report of the findings
Presentation

Part 2. Designing human-AI interaction (30%)

- Opportunity mapping
- Concept definition and stakeholder value flow
- AI systems and interaction
    - Scenarios and wireframes
    - Prototype
- Presentation