

CSE 593

Human-Computer Interaction

Farnaz Jahanbakhsh

Farnaz Jahanbakhsh

Assistant Professor of Computer Science &
Engineering

Faculty at the Human-Centered Computing Lab

Pronouns: she/her/hers

Office: 3645 BBB

Email: farnaz@umich.edu

Website: <https://people.csail.mit.edu/farnazj/>

Farnaz Jahanbakhsh

- PhD in Computer Science from MIT CSAIL
- Postdoc Fellow at Stanford HAI (Human-Centered AI)
- Computer scientist doing HCI research
- Research Interest: Social Computing

Social Computing

Study of the design of social computing systems



Computational systems that mediate social interactions



DISCOURSE | TECH

The hottest new dating site: LinkedIn

People are mixing business with pleasure on the job site. What could possibly go wrong?

POLITICS

Thousands of fake Facebook accounts shut down by Meta were primed to polarize voters ahead of 2024



**How Social Media Turns Neighbors Into
Vigilantes**

First, the gentrifiers moved in next door. Now, they're wasting my tax dollars
calling the police on their neighbors.

Social Computing

Using computing techniques to design online social spaces that help:

- Support interactions between groups
- Encourage certain desirable norms
- Safeguard against harmful behaviors

Jaylin Herskovitz

5th year PhD Student, CSE

Pronouns: she/her

Website: <https://jayl.in/>

Research Interests: AI for visual accessibility

Office hours: Monday & Wednesday at 11am (on Zoom, see Canvas for link)



Goals

- Introduce the course
- Introduce Human-Computer Interaction

Logistics

- Canvas
- Mailing list: cse-593-f24-staff@umich.edu
- [Piazza](#)
- Attendance not mandatory, but strongly encouraged
 - In-person
 - Remote synchronous
 - Remote asynchronous

Components

- Lecture review exercises
 - Count as in-class participation
 - Open for 24 hours after lecture time
- Readings
 - Due before the class starts
- Exams:
 - Quizzes
 - Midterm
 - Final
- Assignments:
 - Individual component
 - Group component

Deadline for all components (except readings): 5pm

Deadlines extended for those who join off the waitlist

What is Human- Computer Interaction?

Please answer this question in Canvas

What is Human-Computer Interaction (HCI)? Select **all** that apply.

- ☐ It is a field that studies how to design and implement interactive computer technology.
- ☐ It is a field that studies how people use interactive computer technology.
- ☐ It is a field that studies interaction between people and any technology.

You have 120 seconds...

DONE!

What is Human-Computer Interaction?

“study of the design and/or use
of interactive
computer technology”

What is Human-Computer Interaction?

“study of the design and/or use
of **interactive**
computer technology”

What is Human-Computer Interaction?

“study of the design and/or use
of interactive
computer technology”

Please answer this question in Canvas

Which of the following could be of interest to HCI research and practice? Select **all** that apply.

- ☐ Productivity tasks in the office.
- ☐ Any aspect of people's lives in which they interact with computer technology.
- ☐ How to optimize network traffic.
- ☐ People who do not interact with any computer technology.

You have 120 seconds...


DONE!

The goal of Human-Computer Interaction

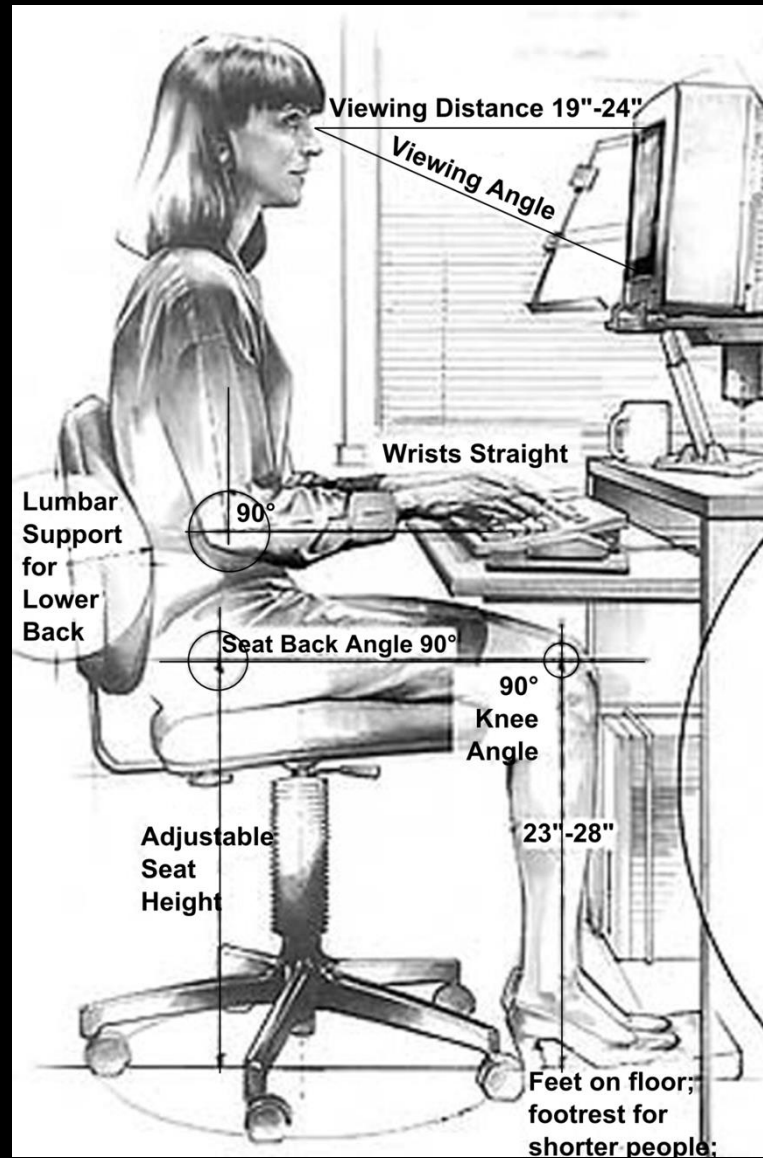
Ensure computational technology
has a positive impact on people
with as little harm as possible

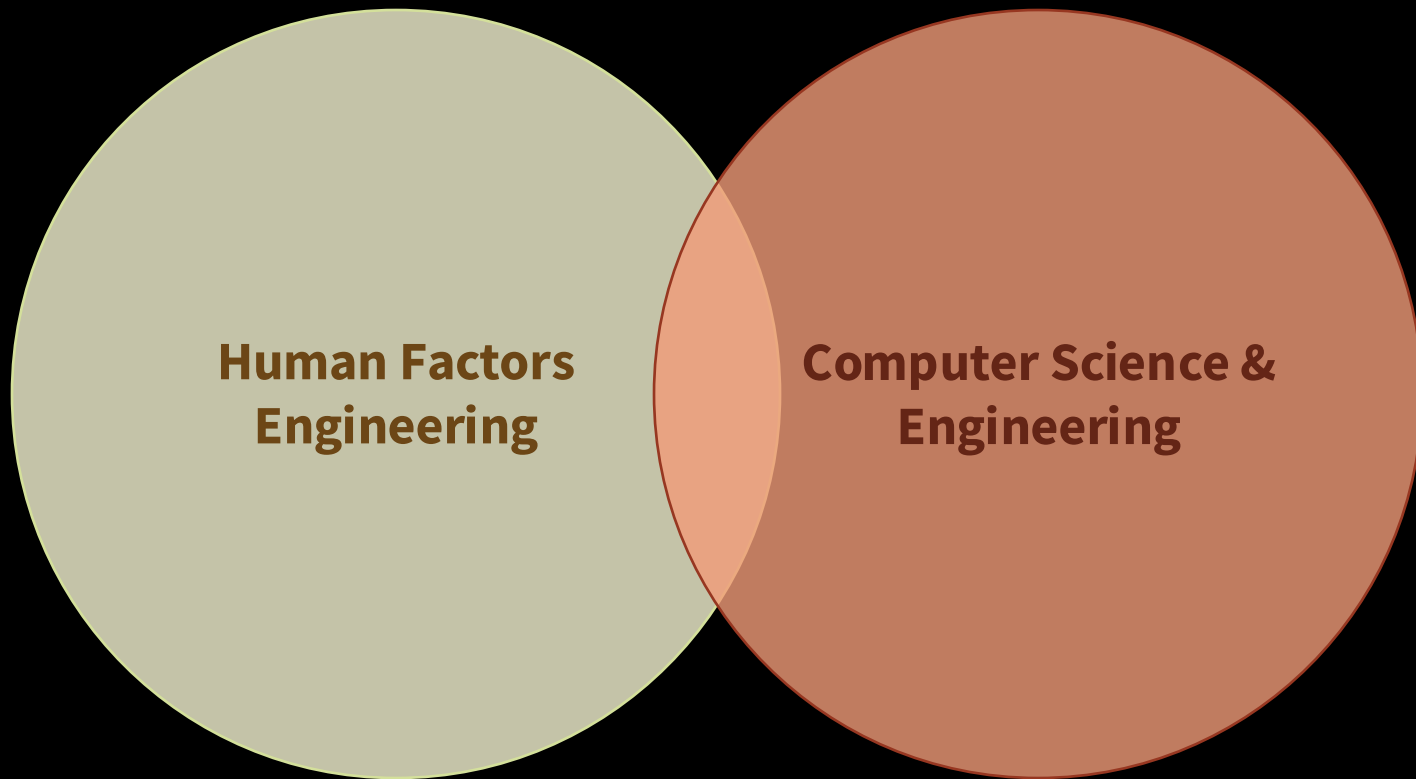
Brief (somewhat accurate) history of HCI

1960's – 1980's Productivity



Human Factors Engineering



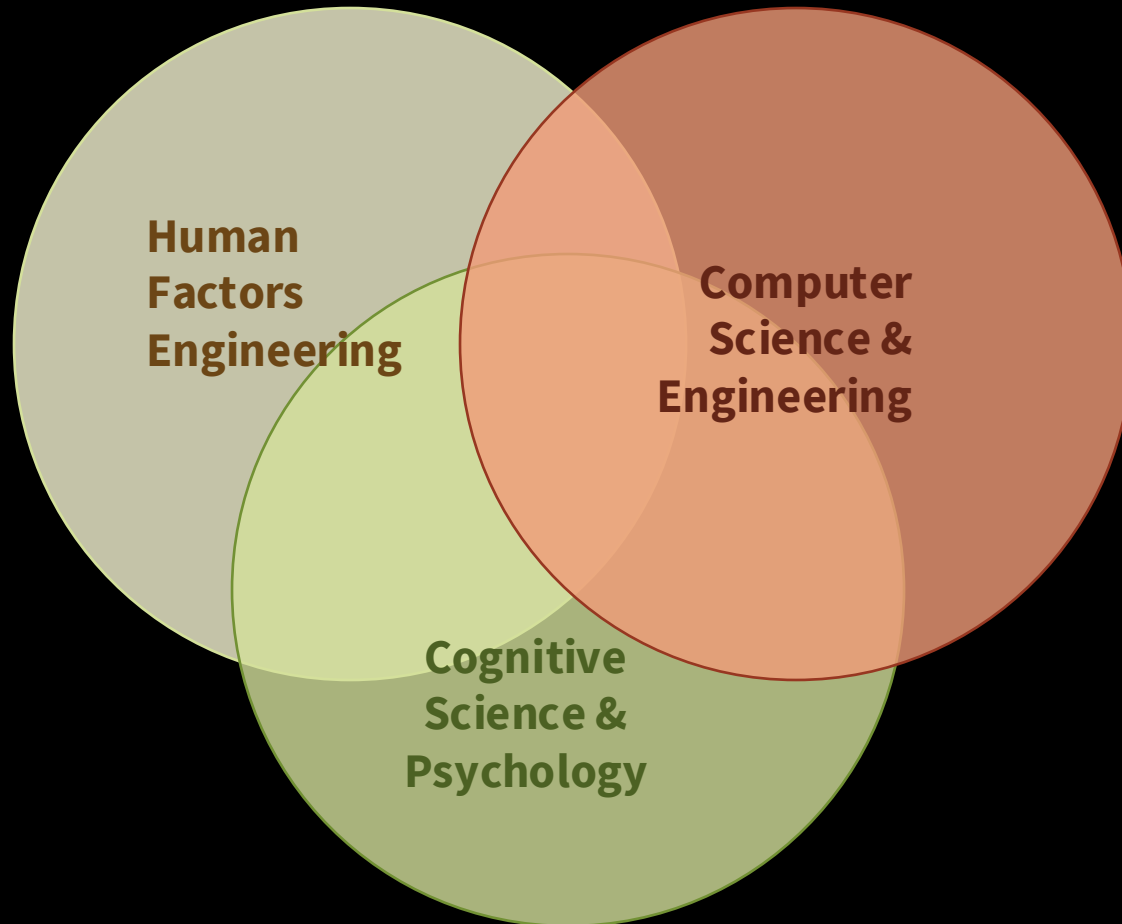


Brief (somewhat accurate) history of HCI

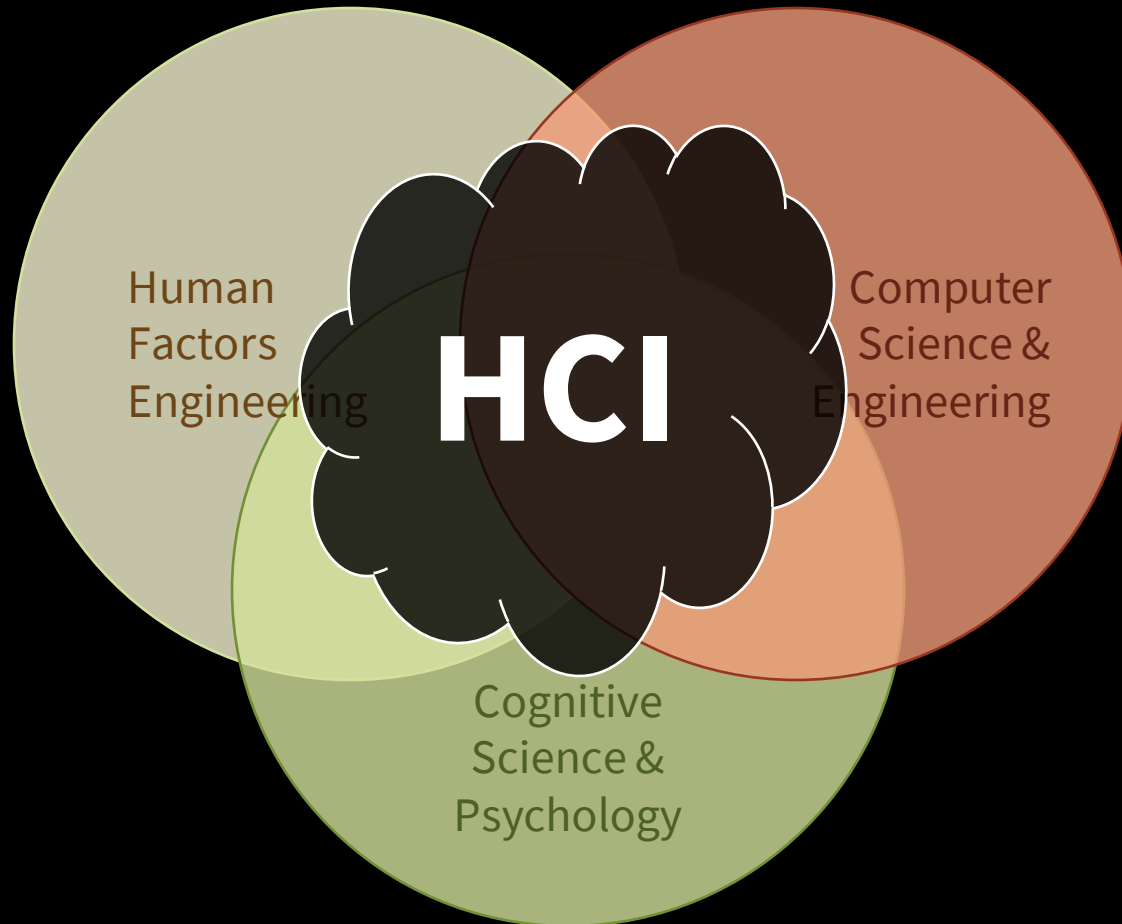
Early 1980's

Productivity

Brief (somewhat accurate) history of HCI

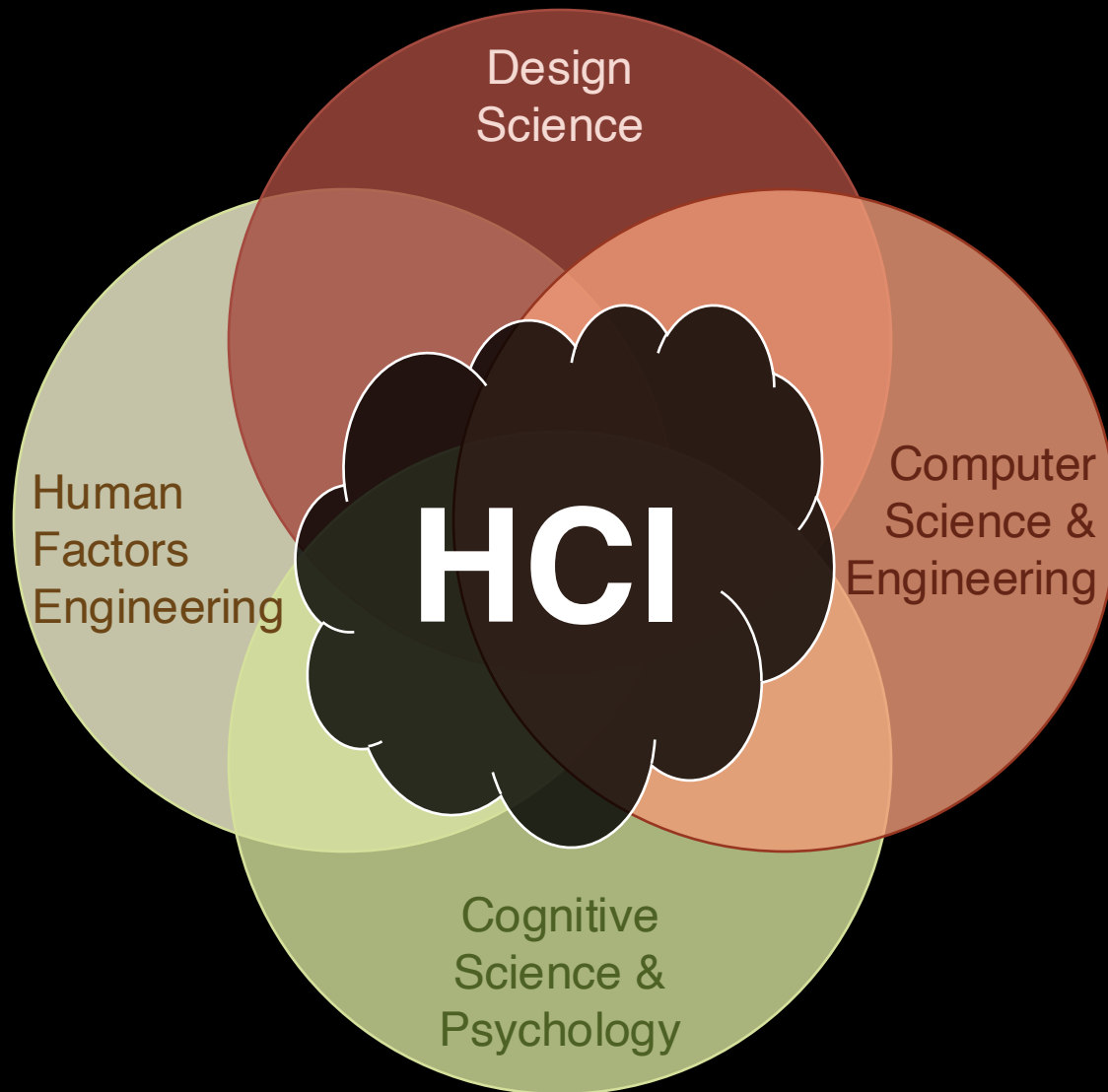


Brief (somewhat accurate) history of HCI



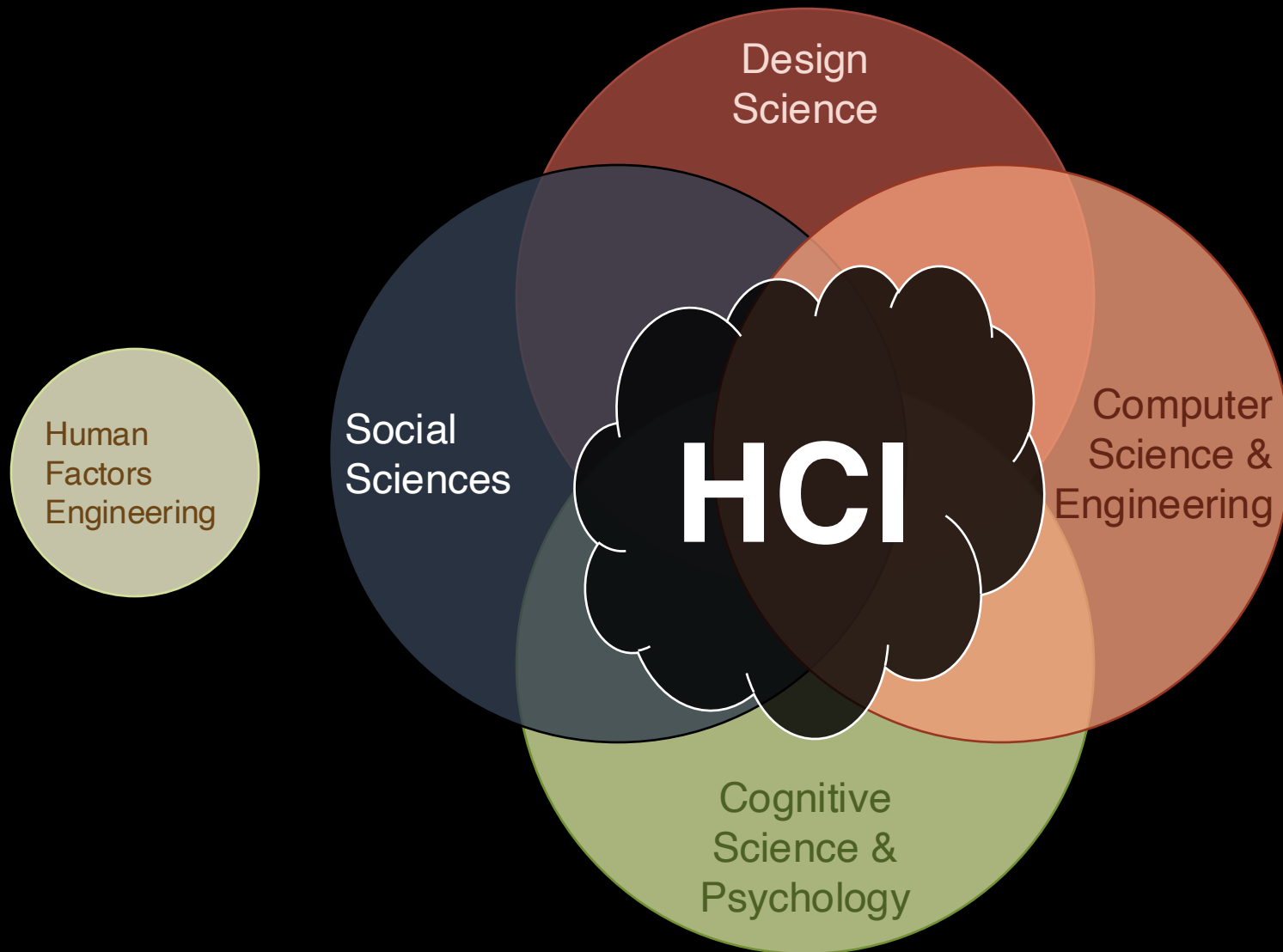
Brief (somewhat accurate) history of HCI

*CHI '82: Proceedings of the
1982 Conference on Human
Factors in Computing Systems*

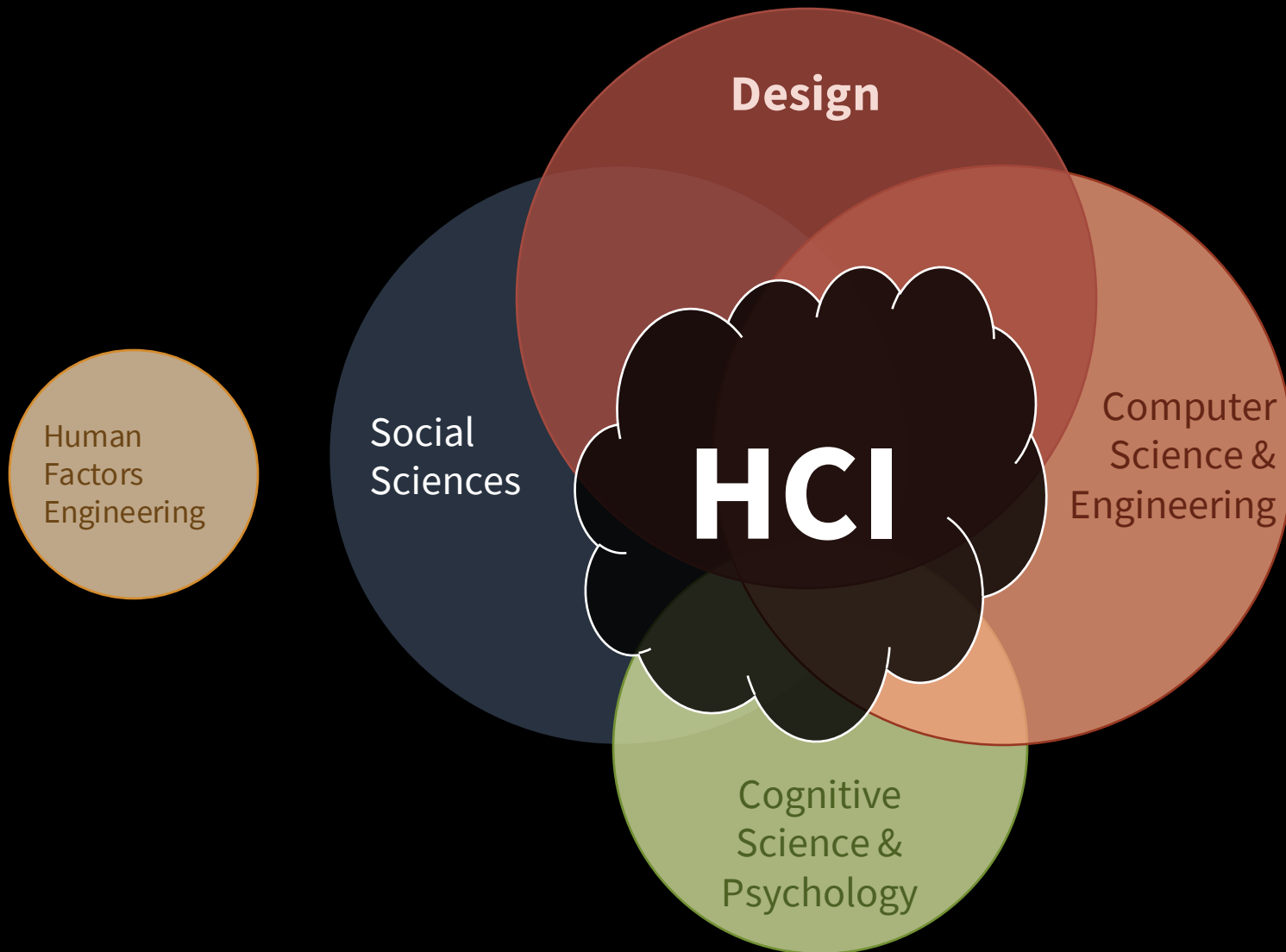


1980's - 2000's

Productivity
Behavior Models
The Sciences of Artificial
Social Computing

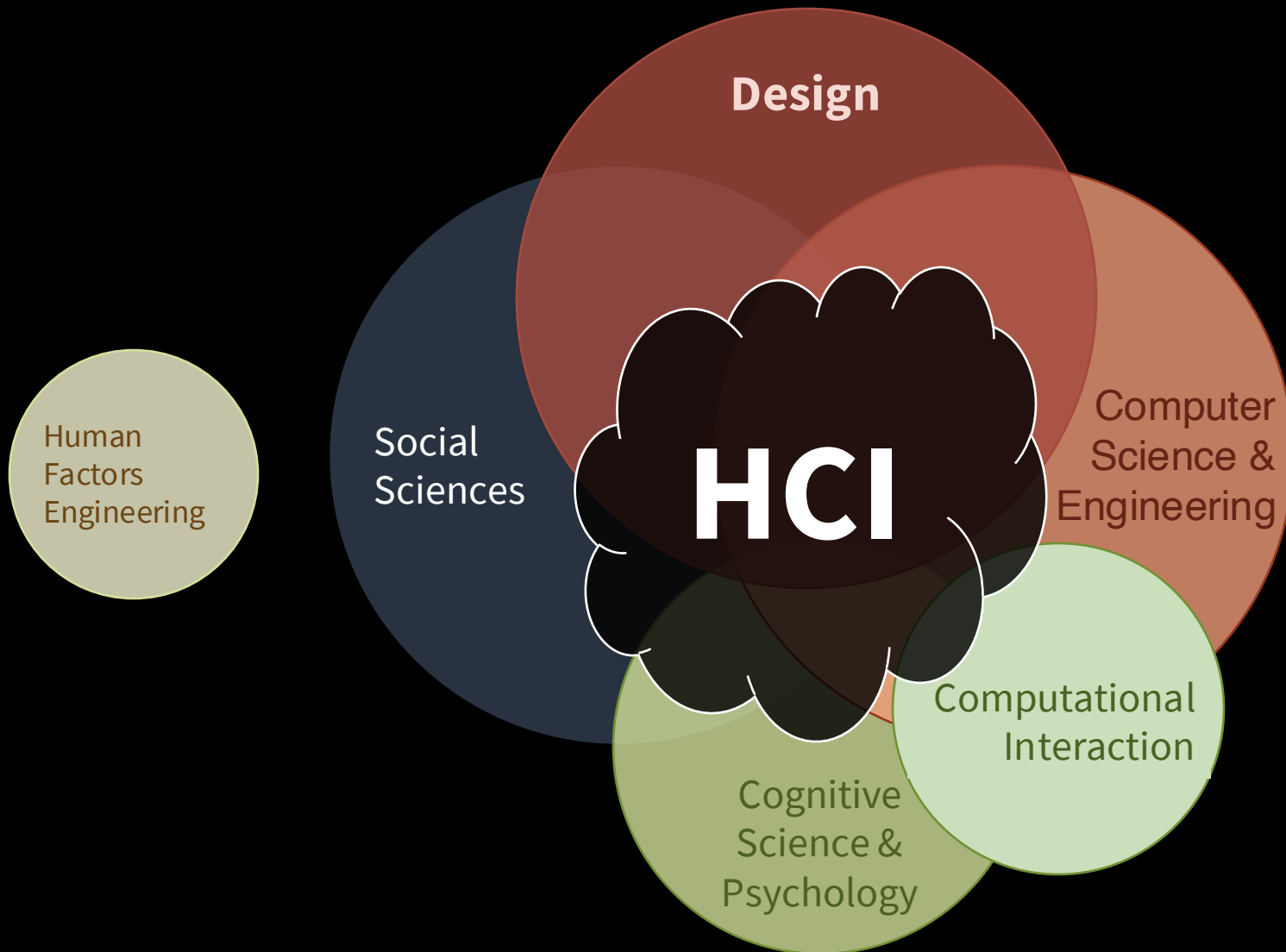


January 9, 2007



2010's

UX/Interaction Design
Ubiquitous Computing
Social Computing
Design Research



2020's - ?

Interaction Design
Ubiquitous Computing
Social Computing
Design Research
Human-AI Interaction
Critical Computing

(Technical) HCI Conferences and Journals

In alphabetical (otherwise no particular) order:

- CHI – umbrella HCI conference
- CSCW – social computing
- DIS – design research
- IMWUT – ubiquitous and mobile computing
- UIST – novel user interactions and systems
- IUI – human-AI interaction

(Some) CHI 2024 Sub-committees:

Design

Learning, Education, and Families

Interaction Beyond the Individual

Games and Play

Health

Accessibility and Aging

Critical Computing, Sustainability, and Social Justice

Privacy and Security

Visualization

Building Devices: Hardware, Materials, and Fabrication

Interacting with Devices: Interaction Techniques & Modalities

Blending Interaction: Engineering Interactive Systems & Tools

Understanding People: Theory, Concepts, and Methods

Computational Interaction

User Experience and Usability

What is Technical HCI?

Please answer this question in Canvas

What is technical HCI? Select **all** that apply.

- ☐ There is no such distinction really; we use these words to placate Computer Scientists and Engineers.
- ☐ It is a field that studies how to design and implement interactive computer technology.
- ☐ It is a field that studies how people use interactive computer technology.

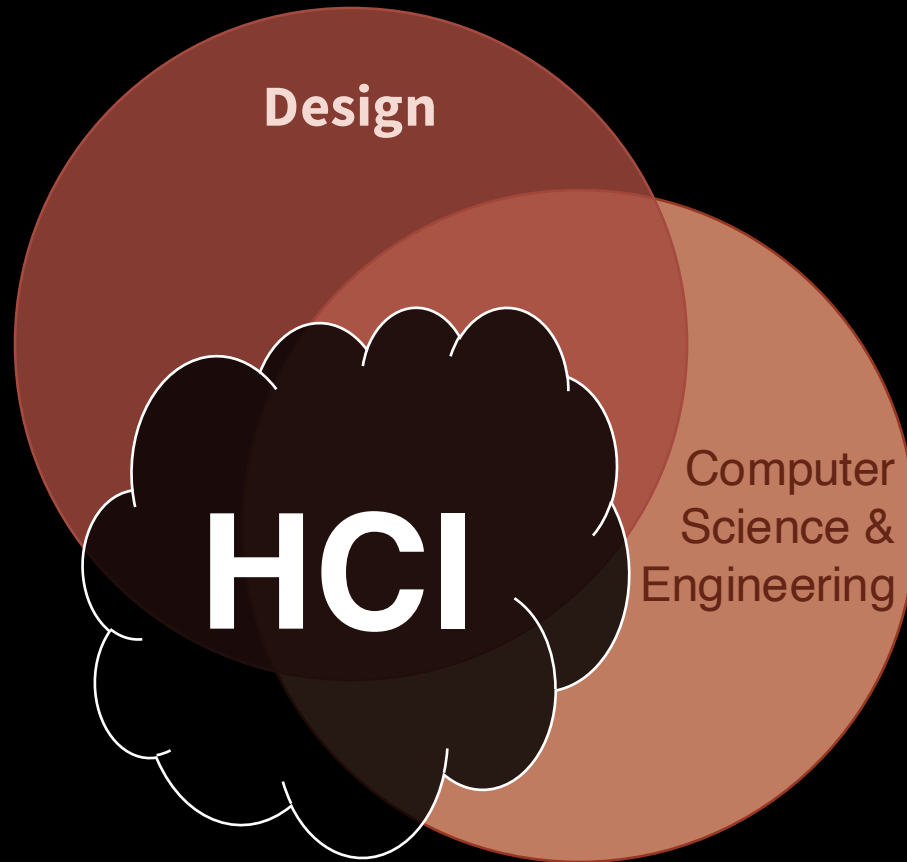
You have 120 seconds...

DONE!

What is technical HCI?

“study of the design and use of
interactive
computer technology”

What is technical HCI?





The secret ingredient is
HUMAN .

Reading Assignments

- Who are the authors?
- Where was it published? Who were they targeting?
- At a minimum, read the abstract, introduction, and discussion
 - What was the “Promise”?
 - What were the “Obstacles”?
 - What was their “Solution”?
 - What are the “Takeaways”?
 - Reflection/ Connections/ Application

How to read research papers

- If the abstract & introduction shows the article is highly relevant read the remaining sections; otherwise skim them.
- Always skim/read the related work to get more “leads”!



Questions, comments, and/or concerns?

Farnaz Jahanbakhsh

farnaz@umich.edu

<https://people.csail.mit.edu/farnazj/>