



IIT ROORKEE



NPTEL ONLINE  
CERTIFICATION COURSE

# Introduction to Interaction Design

## Lecture 01

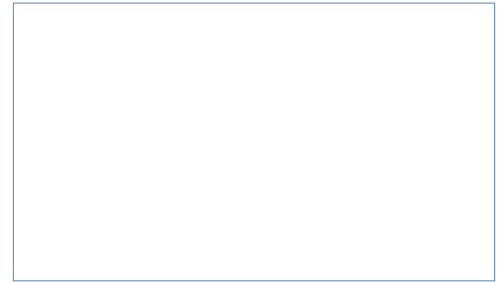
### Introduction to Interaction Design

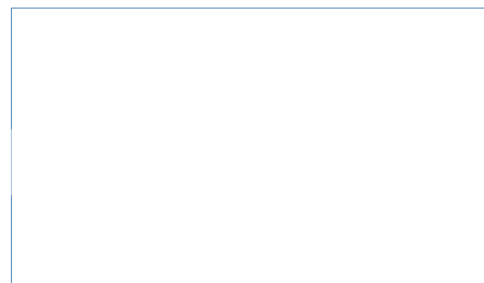
Prof. Sonal Atreya  
DEPARTMENT OF DESIGN

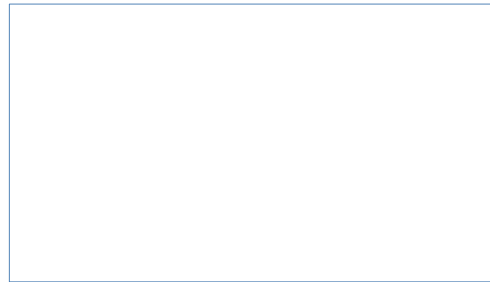


# Lecture 01

## Introduction





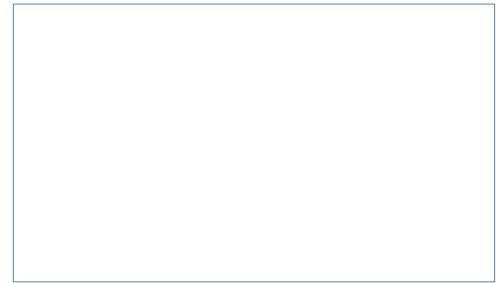






## Goal

- Create engaging user experiences.
- Understand how emotions work.
- What is significance of aesthetics, desirability, and the role of narrative in human experience.
- Business side, technical side, manufacturing side, and marketing side.

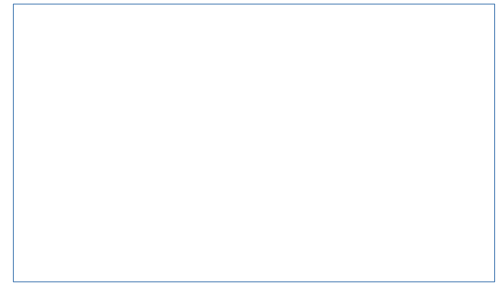


## Who is involved in Interaction design?

Design team depends on the kind of interactive product being built.

Example: health app

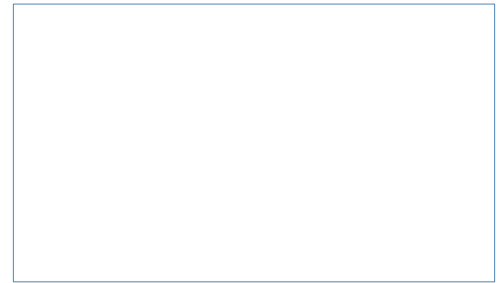
Graphic and interaction designers, software engineers, software designers, health care professionals, ergonomists.







Source: google.com



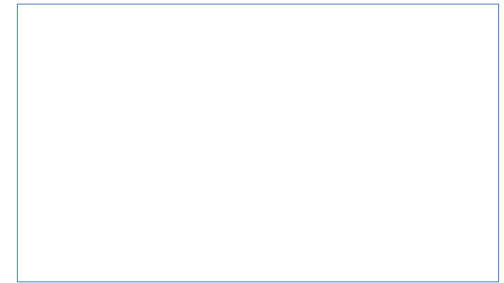
# What is Human-computer Interaction (HCI)?



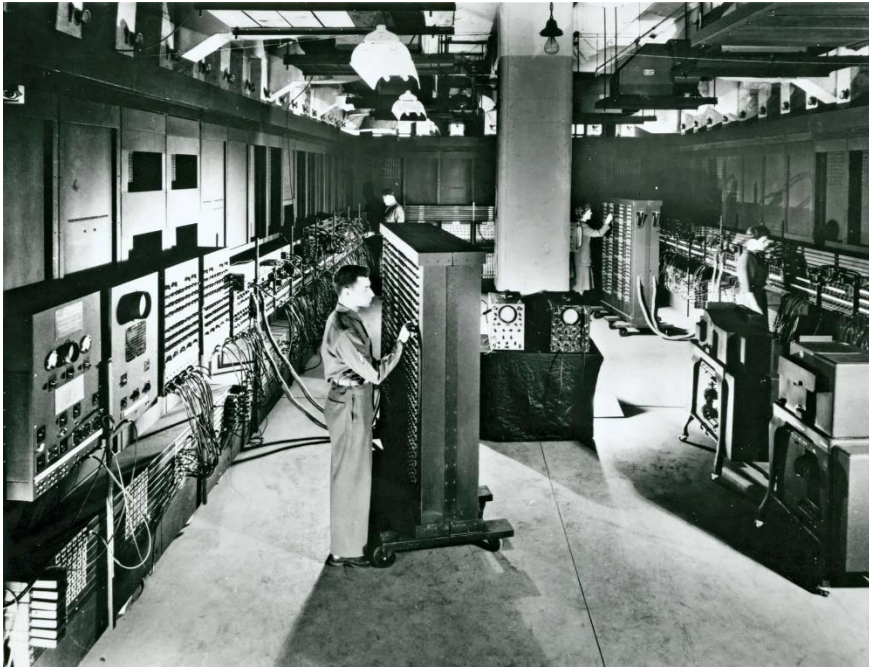
Source: Designed by macrovector

Importance of Human-computer Interaction:

- Efficiency
- User Satisfaction
- Accessibility
- Safety
- Innovation



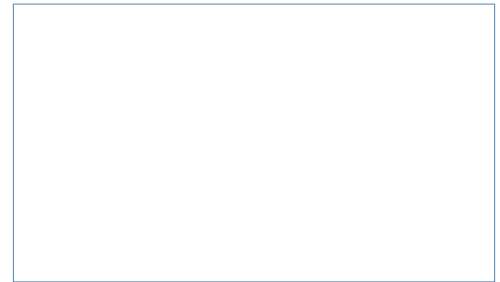
## History: Human-computer Interaction

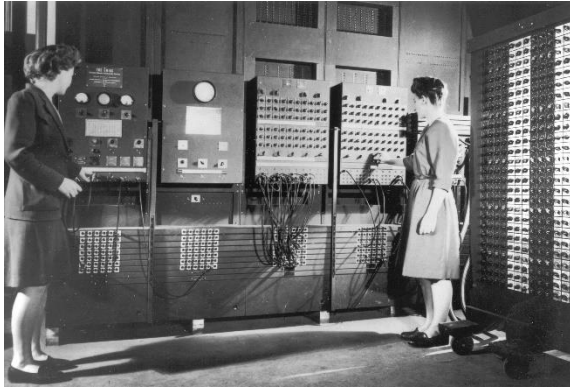


Source: <https://cdn.britannica.com/95/170195-050-EFCB2F83/ENIAC-1946.jpg>

### ENIAC, Electronic Numerical Integrator and Computer

- It was the first electronic digital computer which was programmable.
- It used plugboards for communicating instructions to the machine.

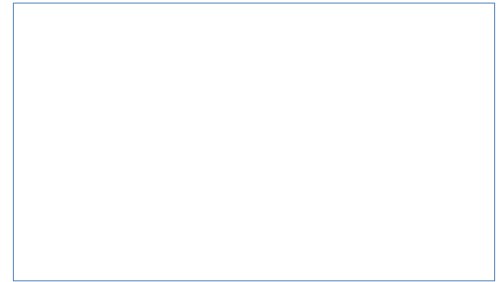




- The Second World War provided the impetus for studying the interaction between humans and machines, as each side strove to produce more effective weapons systems.
- HCI was studied in many devices like Radars, control panels of complex machines, military equipment, etc.
- The term ***human-computer interaction*** has only been in widespread use since the early 1980s.

Source image1: [https://upload.wikimedia.org/wikipedia/commons/8/8c/Two\\_women\\_operating\\_ENIAC\\_\(full\\_resolution\).jpg](https://upload.wikimedia.org/wikipedia/commons/8/8c/Two_women_operating_ENIAC_(full_resolution).jpg)

Source image2: <https://www.iwm.org.uk/history/how-radar-changed-the-second-world-war>

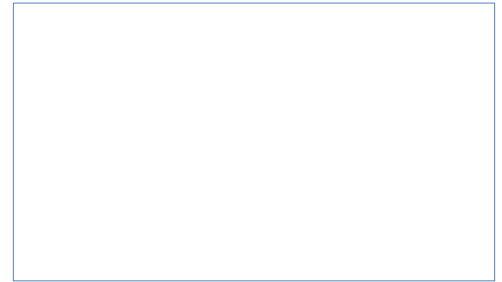


# Ivan Sutherland's SketchPad-1963



Source: <https://bimaplus.org/news/the-very-beginning-of-the-digital-representation-ivan-sutherland-sketchpad/>

- Introduced the concept of digital sketching, 3D CAD, icons, visual simulation and virtual reality, efficient use of light pen.

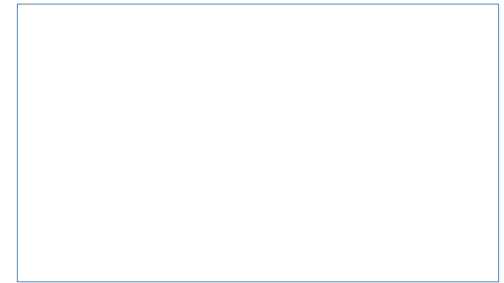


# Evolution of Interaction following the advancement of technology

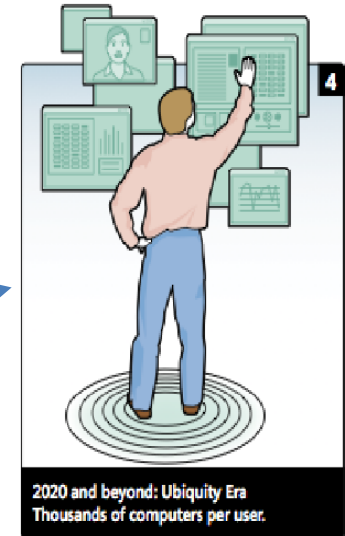
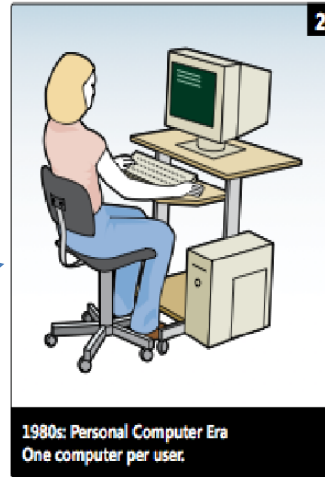
- No Interactions
- Attentive Interactions
- Graphical User Interactions
- Touch and feel interaction
- Immersive interaction
- Interaction using AI



Source: <https://medium.com/xrpractices/evolution-of-technology-and-user-interactions-e9ab9c2d37f>



# Significant Advances in Human-Computer interaction since 1960

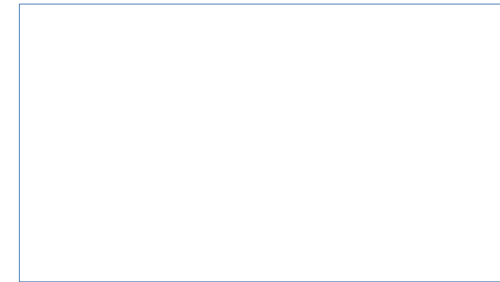


Source: <https://www.microsoft.com/en-us/research/project/being-human/>

# Evolution of interaction in telephone devices

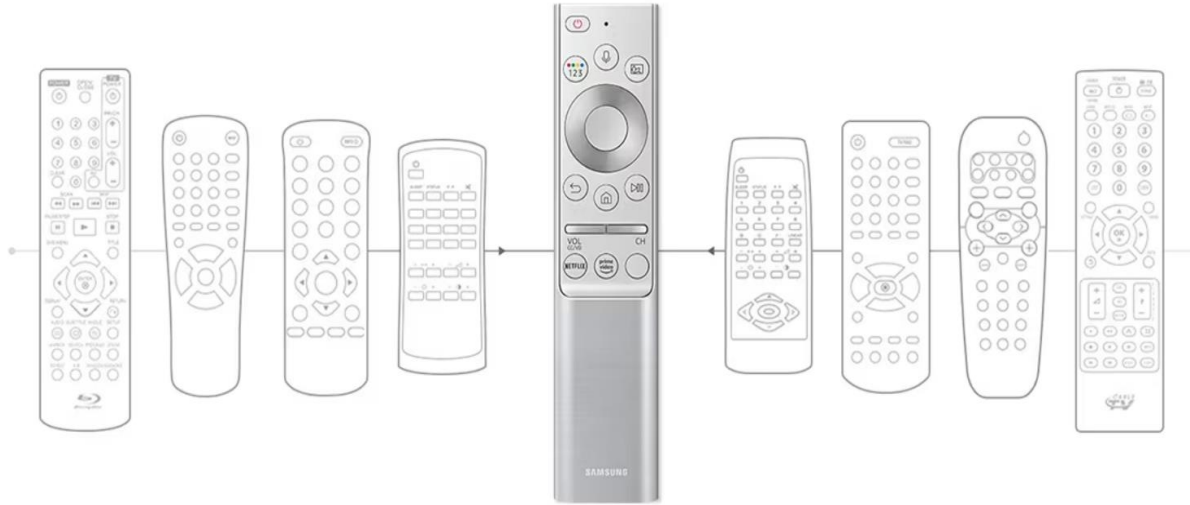


1. Rotatory dials
2. Touch-tone telephone
3. Chordless telephone
4. Mobile telephones
5. Telephones with touch interactive display





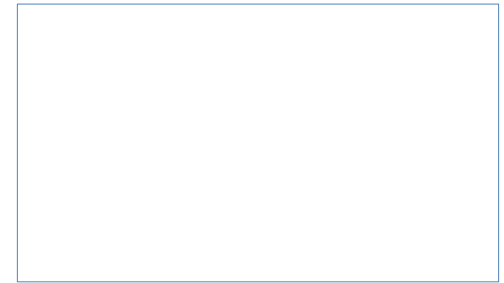
# Evolution in interaction with better design and ease of use.

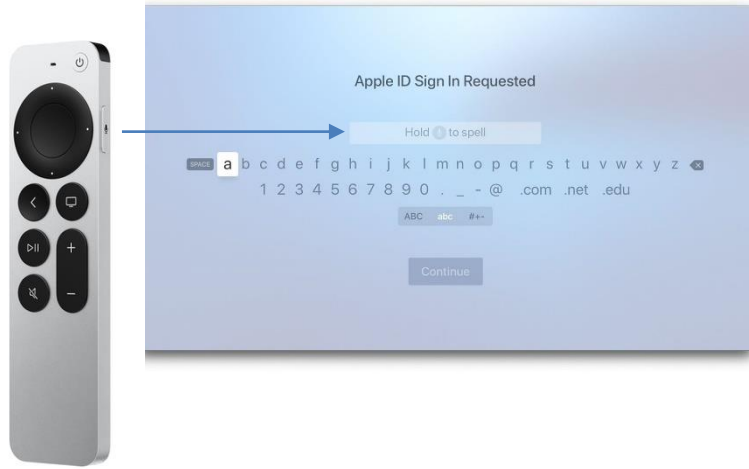


Source: <https://www.samsung.com/in/tvs/tv-buying-guide/remote-control-for-tv/>

- Use of voice assistance
- Easy scrolling through channels.
- Limited quick access button
- Ergonomically design

“Good design is as little design as possible” ~ Dieter Rams



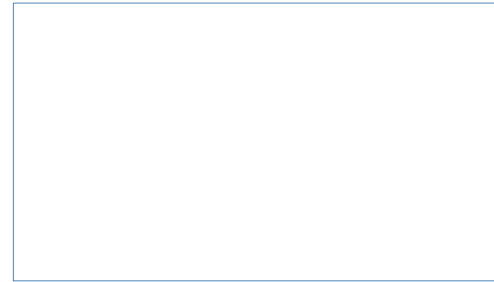


Source: <https://www.apple.com/in/shop/product/MNC73Z/A/siri-remote>



Source: <https://news.samsung.com/global/samsung-strengthens-its-smart-tv-voice-capabilities>

- Typing on TV was made easier by enabling voice assistance on devices like Apple Siri Remote, and Samsung remotes and TVs with in-built Alexa



**Thank You**

