CHAPTER 3. DISCIPLINES OF HCI

Human-Computer Interaction, or HCI, is an interdisciplinary field with several facets. It incorporates anthropology, industrial design, psychology, sociology, and computer science, among other subjects. Human-machine interaction (HCI) studies how humans and machines work together to complete tasks, how humans and machines communicate, how humans can use machines, how algorithms and interface programming work, how engineering is involved in interface design, how design specifications and implementation are carried out, and how trade-offs are addressed in the process.

**3.1. What is HCI?**

Human-computer interaction, or HCI, is a broad, multidisciplinary field that has developed into a subfield within a number of different disciplines, each with a specific area of focus:

* Computer Science
* Psychology
* Sociology and Anthropology
* Industrial Design

HCI covers a wide range of topics including how humans and machines work together to complete tasks, how humans and machines communicate, how humans use machines, how to use algorithms and programming for interfaces, how engineering is involved in creating and designing interfaces, how design trade-offs are handled, and more.

it briefly, human-computer interaction (HCI) is a multidisciplinary discipline that incorporates elements of industrial design, psychology, sociology, anthropology, and computer science. Its main goal is to enhance human-technology interaction, which includes a wide variety of usability and user experience issues.

### 3.2. Interdisciplinary Nature of HCI

Understanding the intricate link that exists between people and computers is a key component of HCI, or human-computer interaction. It is multidisciplinary in nature, drawing on a range of fields. The following are some important fields and how they have impacted HCI:

### Interdisciplinary Nature of HCI – Human Side

* Cognitive Psychology
* Social Organizational Psychology
* Ergonomics and Human Factors
* Linguistics
* Philosophy
* Sociology
* Anthropology

### Interdisciplinary Nature of HCI – Computer Side

* Computer Science
* Artificial Intelligence
* Engineering
* Design

The field of Human-Computer Interaction (HCI) covers a number of important subjects. Every HCI activity takes place in an organizational and social setting, necessitating distinct applications for varied goals. It is essential to divide work between people and robots in order to automate repetitive operations. It is essential to comprehend the psychological and physiological capacities and constraints of humans, especially those related to information processing, language, interaction, communication, and ergonomics. Additionally, to match technological capabilities with human requirements, one must be knowledgeable with computer hardware and software. Input strategies, conversation strategies, computer visuals, and dialogue architecture are important technological factors to take into account. It takes a synthesis of this information to develop computer systems with effective human-computer interaction. These systems are designed using tools and methodologies, and evolution aids in the validation of user demands and preferences by designers.