



Human and Machine Interaction 2

LEARNING OUTCOMES

At the end of the chapter, students will be able to:

- ▶ Describe the Technology – Then and Now
- ▶ Understand Human-Machine Interaction
- ▶ List the HMI – Components
- ▶ Differentiate between different levels of HMI
- ▶ Explain how does Human-Machine Interaction Work
- ▶ Associate the various uses of Human-Machine Interface
- ▶ Categorise the Advantages and Disadvantages of HMI
- ▶ Analyse the future of HMI

CHAPTER NOTES

- ▶ Technology has advanced exponentially, becoming more integrated into our daily lives.
- ▶ Command-Line Interface (CLI): They interact through text-based commands and prompts.
- ▶ Touch and Gesture-Based Interaction: Interaction through touchscreens or touch-sensitive surfaces, using gestures like tapping, swiping, or pinching.
- ▶ The full cycle of stages for a given interaction involves: forming the intention, selecting an action, executing the action, evaluating the outcome.
- ▶ HMI communicates with input and output sensors and programmable logic controllers (PLCs).
- ▶ HMI enhances communication between manufacturing processes and between machines and men.
- ▶ New technologies in HMIs will allow machines to communicate with humans and will improve accuracy, safety and problem-solving time.