

Chapter-9

AI Around Us

Part A: Fill in the Blanks

1. Alexa uses _____ to interpret voice commands and convert them into text commands.
2. Smart Doorbells use _____ to enhance home security and convenience.
3. Self-driving vehicles rely on _____ to perceive their environment and make driving decisions.
4. Face detection involves identifying facial features such as _____, nose, and mouth.
5. Chatbots use _____ to understand and respond to user inputs.
6. Google Maps helps users find locations, get directions, and explore areas _____.
7. The _____ level of autonomy in self-driving vehicles requires no human intervention.
8. Face detection is used in _____ for unlocking devices and authenticating users.
9. _____ chatbots use predefined rules and scripts to respond to specific inputs.
10. Google Maps can be accessed by typing _____ in the address bar.

Part B: True or False

1. Alexa can only be used with Amazon Echo devices. (True/False)
2. Smart Doorbells can send live video feeds to homeowners. (True/False)
3. Self-driving vehicles at Level 5 autonomy require human intervention.
(True/False)
4. Face detection is only used in security and surveillance. (True/False)
5. Chatbots can handle multiple conversations simultaneously. (True/False)
6. Google Maps provides real-time traffic updates. (True/False)
7. AI-powered chatbots can learn from interactions and improve over time.
(True/False)
8. Face detection algorithms are not affected by lighting conditions. (True/False)
9. Rule-based chatbots are more flexible than AI-powered chatbots. (True/False)
10. Google Maps can only be used on mobile devices. (True/False)

Multiple Choice Questions

1. What technology does Alexa use to interpret voice commands?
 - a) Machine Learning
 - b) Natural Language Processing (NLP)
 - c) Computer Vision
 - d) Deep Learning
2. Which of the following is NOT a component of self-driving vehicles?
 - a) Sensors and Cameras

- b) Radar and Lidar
 - c) AI Algorithms
 - d) Manual Steering Wheel
3. What is the primary function of face detection in smartphones?
- a) Playing music
 - b) Unlocking devices
 - c) Sending messages
 - d) Making phone calls
4. Which type of chatbot uses predefined rules and scripts?
- a) AI-Powered Chatbots
 - b) Rule-Based Chatbots
 - c) Hybrid Chatbots
 - d) None of the above
5. What does Level 5 autonomy in self-driving vehicles mean?
- a) The vehicle requires constant human intervention.
 - b) The vehicle can operate independently in most situations.
 - c) The vehicle is capable of all driving functions without any human input.
 - d) The vehicle can only drive on highways.
6. Which of the following is a challenge in face detection?
- a) Variability in lighting
 - b) High cost

- c) Limited applications
 - d) Easy detection of occlusions
7. What is the main advantage of using chatbots in customer service?
- a) They can only handle one conversation at a time.
 - b) They are available 24/7.
 - c) They require human intervention for every query.
 - d) They are expensive to maintain.
8. How can you access Google Maps on a computer?
- a) By downloading it from the app store
 - b) By typing google.com/maps in the address bar
 - c) By calling a customer service number
 - d) By sending an email to Google
9. Which AI technique is commonly used in face detection?
- a) Tokenization
 - b) Haar cascades
 - c) Entity Recognition
 - d) Intent Recognition
10. What is the primary use of Google Maps?
- a) Playing games
 - b) Finding locations and getting directions
 - c) Sending emails
 - d) Making phone calls

