

***Introduction to Artificial Intelligence - A Business
Perspective 1st edition Hoisington Solutions Manual***

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Solution and Answer Guide

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END OF CHAPTER REVIEW QUESTIONS AND SOLUTIONS

- 1. Provide three examples from the text that indicate how AI is transforming business operations.**

Answers will vary, but may include automation in manufacturing and the auto industry, virtual assistants in customer service, AI technology in financial fraud detection, robotic surgery, and autonomous agricultural equipment.

- 2. What is generative AI and how does it work?**

Generative AI is a type of AI that can create new text compositions, realistic images, high-quality video, original audio, or programming code. It employs generative models that discover the rules and patterns of their input training data and then create new data that resembles and builds on the original content.

- 3. What is the main product introduced by OpenAI that has contributed to the AI boom?**

ChatGPT is the main product released by OpenAI that has contributed to the AI boom.

- 4. How does ChatGPT generate human-like text responses?**

ChatGPT generates human-like text responses by training on a massive amount of data and using a transformer model that understands the meaning of phrases and sentences by considering the relationships among words.

- 5. What is the purpose of AI chatbots in business?**

Business uses AI chatbots to enhance customer experiences by providing personalized, immediate answers to customer questions, helping with tasks like choosing products, outlining business plans, and handling customer support requests.

- 6. How does LEGO use AI chatbots to improve customer interactions?**

LEGO uses an AI chatbot named Ralph on Facebook Messenger to guide shoppers through a series of questions and recommend suitable gifts, resulting in a higher return on investment for Messenger ads.

7. **What is the role of AI in Duolingo's language learning app?**

Duolingo uses AI in its Roleplay feature to allow learners to practice real-world conversation skills with native-speaking fictional characters, enhancing the language learning experience.

8. **How does Instagram use AI for content recommendations and personalized advertising?**

Instagram uses AI for content recommendations, image recognition, and personalized advertising by analyzing user behavior and preferences to show relevant content and ads.

9. **What is the function of Sephora's Virtual Artist app?**

Sephora's Virtual Artist app uses AI to create an interactive virtual makeup try-on experience, allowing users to see how different makeup products look on them before making a purchase.

10. **How does North Face use AI chatbots on their website?**

North Face uses AI-driven chatbots on their website to enhance the customer experience by responding to product questions, recommending equipment, and guiding customers through the buying process.

11. **What are autonomous mobile robots (AMRs), and how are they used in manufacturing?**

Autonomous mobile robots (AMRs) are robots equipped with advanced sensors and navigation systems that can perform tasks autonomously, such as maintaining quality control and inventory management, reducing labor costs, and increasing production efficiency.

12. **How is AI being used in the finance industry?**

AI is used in the finance industry for tasks such as fraud detection, loan processing, and investment options. It can flag potentially fraudulent transactions and protect consumers from identity theft.

13. **What are some applications of AI in healthcare?**

AI is used in healthcare to automate improvements in reading medical scans, predicting patient health risks, speeding up medication development, and performing robotic surgeries.

14. **How is AI impacting the agriculture industry?**

AI is used in agriculture for tasks employing self-driving tractors, automated harvesting, and precision weed control, which improve efficiency and reduce the need for chemical pesticides.

15. **What are the ethical considerations when using AI language models like ChatGPT?**

Ethical considerations when using AI language models like ChatGPT include ensuring privacy, fairness, and responsible use, as well as addressing potential biases and inaccuracies in the AI's responses.