Stimulation Exercise 2

Data scientist working for a tech company that wants to develop an AI system to improve customer service. Your task is to use different AI techniques to analyze customer feedback, predict customer satisfaction, and provide personalized responses. You will need to use concepts such as machine learning, supervised learning, unsupervised learning, reinforcement learning, deep learning, natural language processing (NLP), and neural networks.

Questions

1. **Data Collection: What type of data would you need to collect to train your AI model for improving customer service?**

A) Customer feedback (e.g., reviews, surveys)

B) Customer interaction logs (e.g., chat transcripts, call recordings)

C) Customer demographic information

D) All of the above

2. **Data Preprocessing**: **Before training your AI model, what preprocessing steps would you take to ensure the data is ready for analysis?**

A) Data cleaning (removing missing or incorrect data)

B) Data normalization (scaling data to a standard range)

C) Text preprocessing (tokenization, stemming, stop-word removal)

D) All of the above

3. **Model Selection**: **Which type of AI model would be most suitable for analyzing customer feedback and predicting customer satisfaction?**

A) Linear Regression

B) Convolutional Neural Networks (CNNs)

C) Recurrent Neural Networks (RNNs)

D) Support Vector Machines (SVMs)

4. **Training the Model**: **What is the purpose of using supervised learning in this scenario?**

A) To train the model using labeled data (e.g., customer feedback with satisfaction ratings)

B) To group similar customer feedback together

C) To explore customer feedback without predefined labels

D) To maximize cumulative rewards through trial and error

5. **Model Evaluation**: After training your model, which metrics would you use to evaluate its performance in predicting customer satisfaction?

A) Accuracy

B) Precision

C) Recall

D) All of the above