**Week 11 - Quiz**

**Question 1:** What are Large Language Models (LLMs) primarily designed to understand and generate?

**a)** Images

**b)** Speech

**c)** Human-like text

**d)** Numerical data

**Correct Answer:** c) Human-like text

**Question 2:** How do Large Language Models analyze the relationships between words in a text to capture contextual information?

**a)** Using linear regression

**b)** Through self-attention mechanisms

**c)** With convolutional neural networks

**d)** By employing recurrent neural networks

**Correct Answer:** b) Through self-attention mechanisms

**Question 3:** What type of training do Large Language Models typically undergo before being fine-tuned for specific tasks?

**a)** Fine-tuning only on task-specific data

**b)** Pre-training on data irrelevant to the target task

**c)** No training is needed

**d)** Pre-training on a general dataset with similarities to the task-specific data

**Correct Answer:** d) Pre-training on a general dataset with similarities to the task-specific data

**Question 4:** Which benefit makes Large Language Models suitable for data verification tasks?

**a)** Their ability to generate images

**b)** Their efficiency in manual verification

**c)** Their potential to replace human verification

**d)** Their capacity to process large text data quickly

**Correct Answer:** d) Their capacity to process large text data quickly

**Question 5:** What challenge could Large Language Models perpetuate if not properly trained on diverse and representative data?

**a)** Algorithmic transparency

**b)** Overfitting

**c)** Ethical concerns

**d)** Data bias

**Correct Answer:** d) Data bias

**Question 6:** What is a suggested method to overcome algorithmic transparency challenges with Large Language Models?

**a)** Increasing the complexity of algorithms

**b)** Simplifying decision-making through smaller networks

**c)** Developing algorithms that provide insights into decision-making

**d)** Using black-box algorithms

**Correct Answer:** c) Developing algorithms that provide insights into decision-making

**Question 7:** What type of information can cross-referencing enhance in the context of data verification?

**a)** The reliability of AI-generated data

**b)** The accuracy of numerical data

**c)** The diversity of training data

**d)** The reliability of data by comparing multiple trusted sources

**Correct Answer:** d) The reliability of data by comparing multiple trusted sources

**Question 8:** Which challenge might arise when cross-referencing information from various sources?

**a)** Lack of data for cross-referencing

**b)** Time-saving benefits of cross-referencing

**c)** Consistency in cross-referenced information

**d)** Source reliability and subjectivity

**Correct Answer:** d) Source reliability and subjectivity

**Question 9:** What is the name of the AI model mentioned in the practical example for automatically recognizing fake news?

**a)** LSTM

**b)** BERT

**c)** VGG16

**d)** ResNet

**Correct Answer:** b) BERT

**Question 10:** What does "BERT" stand for in the context of AI models?

**a)** Bidirectional Encoder Representation Technology

**b)** Basic Encoder for Reliable Text

**c)** Biased Encoder Representations for Texts

**d)** Bi-Directional Encoder Representations from Transformers

**Correct Answer:** d) Bi-Directional Encoder Representations from Transformers