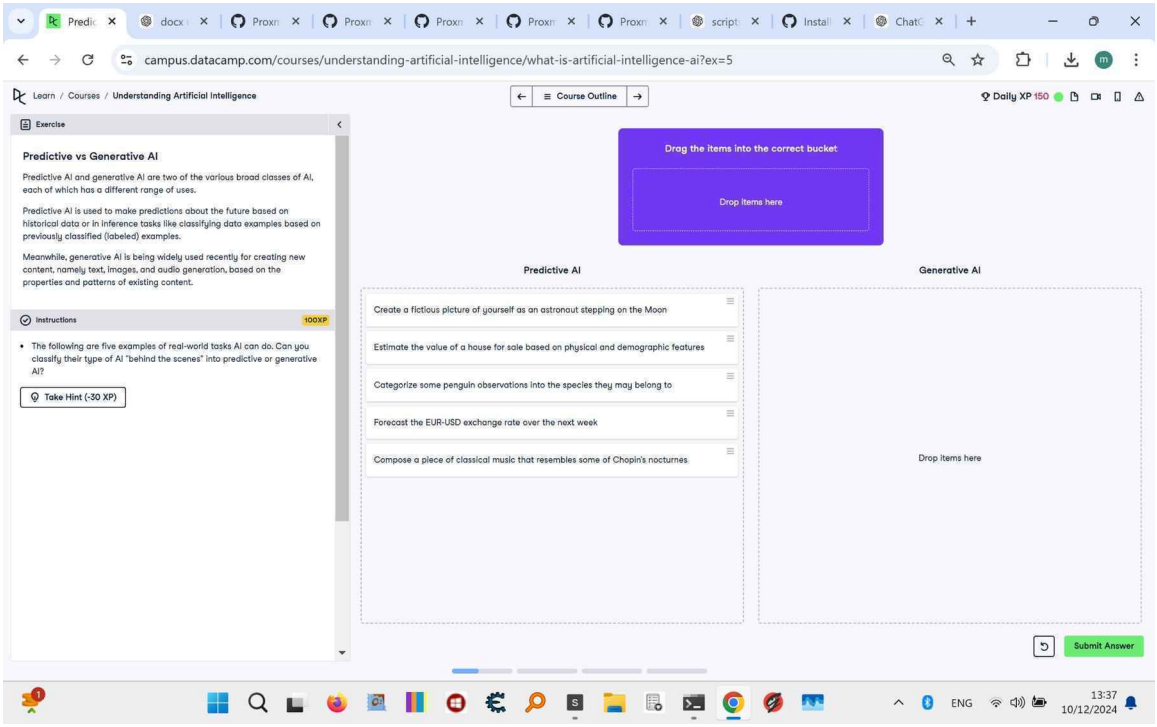
Predictive vs Generative AI



Question

Predictive AI and generative AI are two of the various broad classes of AI, each of which has a different range of uses.

Predictive AI is used to make predictions about the future based on historical data or in inference tasks like classifying data examples based on previously classified (labeled) examples.

Meanwhile, generative AI is being widely used recently for creating new content, namely text, images, and audio generation, based on the properties and patterns of existing content.

The following are five examples of real-world tasks AI can do. Can you classify their type of AI 'behind the scenes' into predictive or generative AI?

Solution

Predictive AI:
- Estimate the value of a house for sale based on physical and demographic features.
- Categorize some penguin observations into the species they may belong to.
- Forecast the EUR-USD exchange rate over the next week.

Generative AI:
- Create a fictious picture of yourself as an astronaut stepping on the Moon.
- Compose a piece of classical music that resembles some of Chopin’s nocturnes.

Explanation

1. **Predictive AI:**
- These tasks involve using historical data to make predictions or classify data into categories. For example, estimating house values or categorizing penguins requires learning from labeled data to infer outcomes for new instances.
- Forecasting the exchange rate also falls under prediction as it relies on past data to predict future trends.

2. **Generative AI:**
- These tasks involve creating new content based on learned patterns. For example, creating an astronaut image or composing music mimicking Chopin involves generating new data based on training with existing patterns.