What is Generative AI?

What is Generative AI?

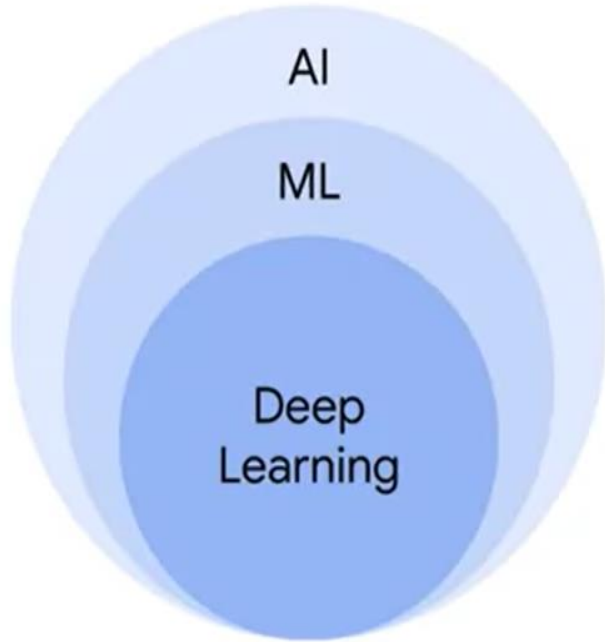
- Generative AI is type of AI that can produce various types of content such as text, image, audio, and synthetic data.

But, What is AI?

AI is the theory and development of computer systems able to perform tasks normally requiring human intelligence.

What is Generative AI?

- GenAI is a type of Artificial Intelligence that creates new content based on what it has learned from existing content.
- The process of learning from existing content is called training and results in the creation of a statistical model.
- When given a prompt, GenAI uses this statistical model to predict what an expected response might be–and this generates new content.



Artificial Intelligence

is a discipline

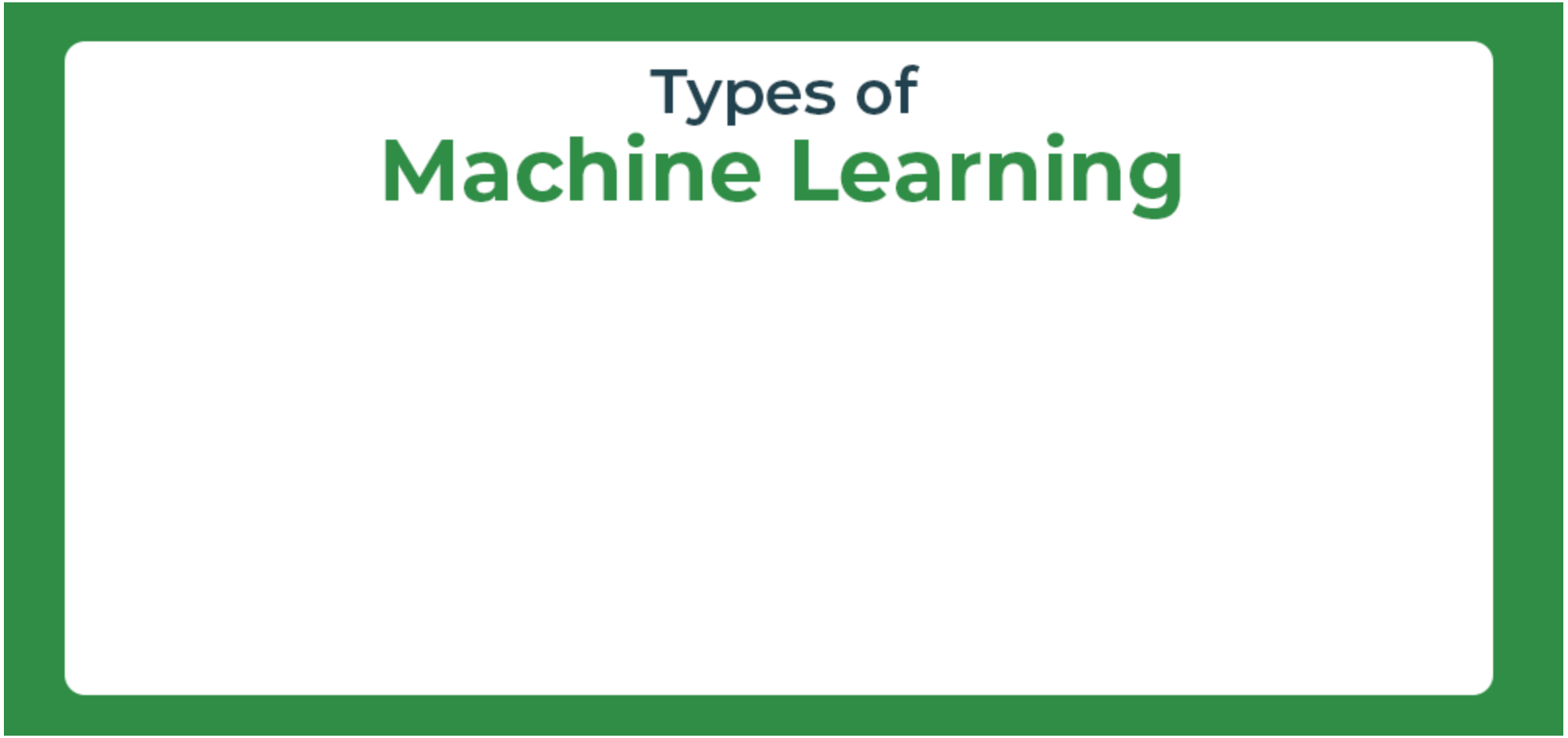
Machine Learning

is a subfield

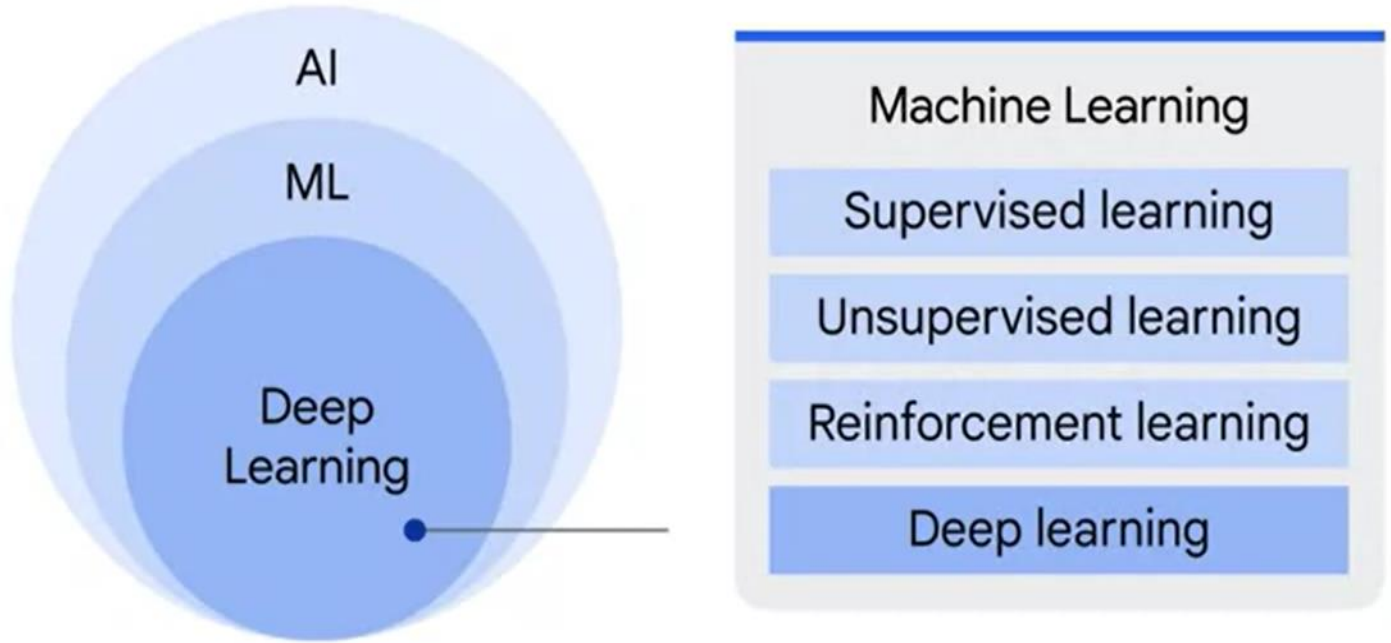
What is ML?

ML gives computers the ability to learn without explicit programming.

Types of Machine Learning:



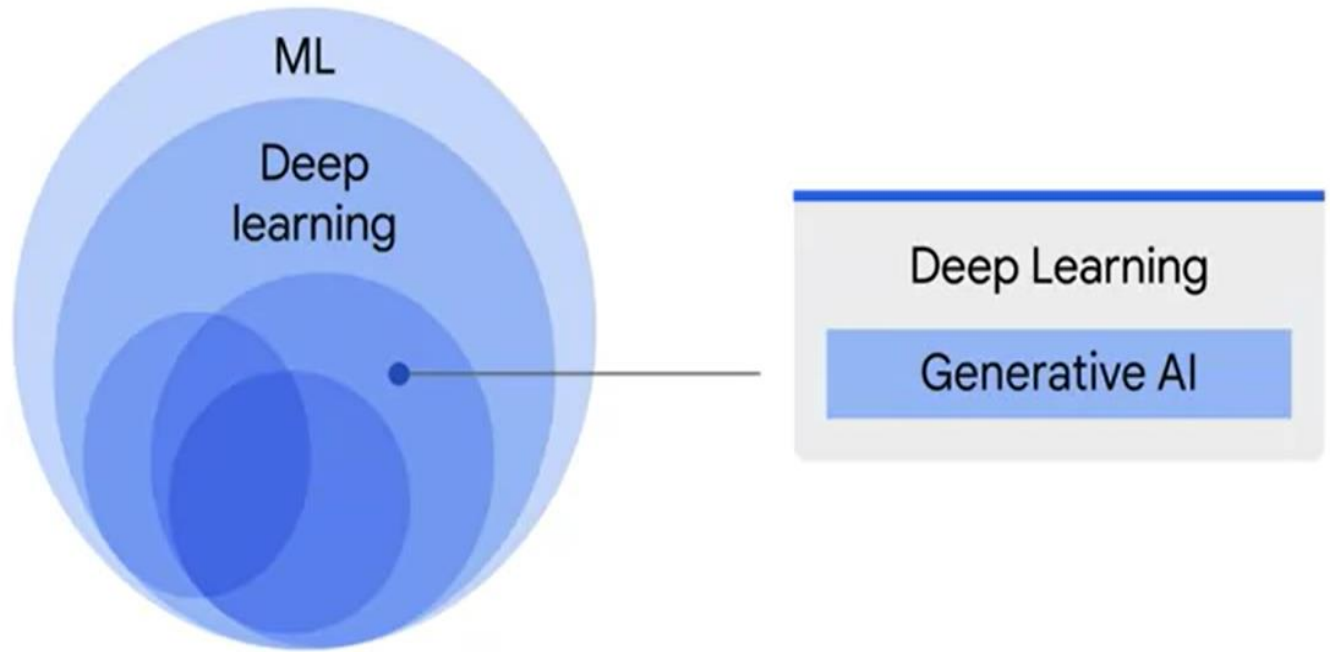
Deep learning is
a subset of ML



What is DEEP LEARNING?

Deep learning uses Artificial Neural Networks - allowing them to process more complex patterns than traditional machine learning.

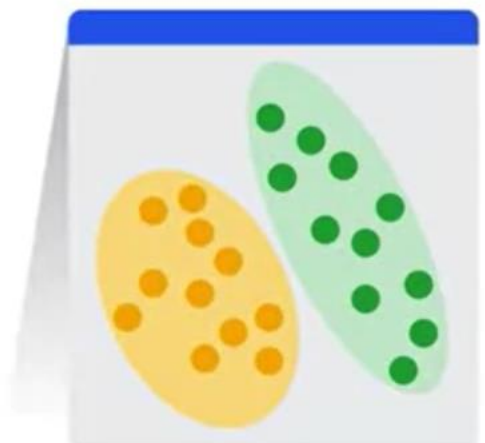
Generative AI is a subset of Deep Learning



Deep Learning Model Types

Discriminative

- Used to classify or predict
- Typically trained on a dataset of labeled data
- Learns the relationship between the features of the data points and the labels



Generative

- Generates new data that is similar to data it was trained on
- Understands distribution of data and how likely a given example is
- Predict next word in a sequence

Discriminative Model

Image

Classify

Discriminative Model (classify as a tiger or a lion)

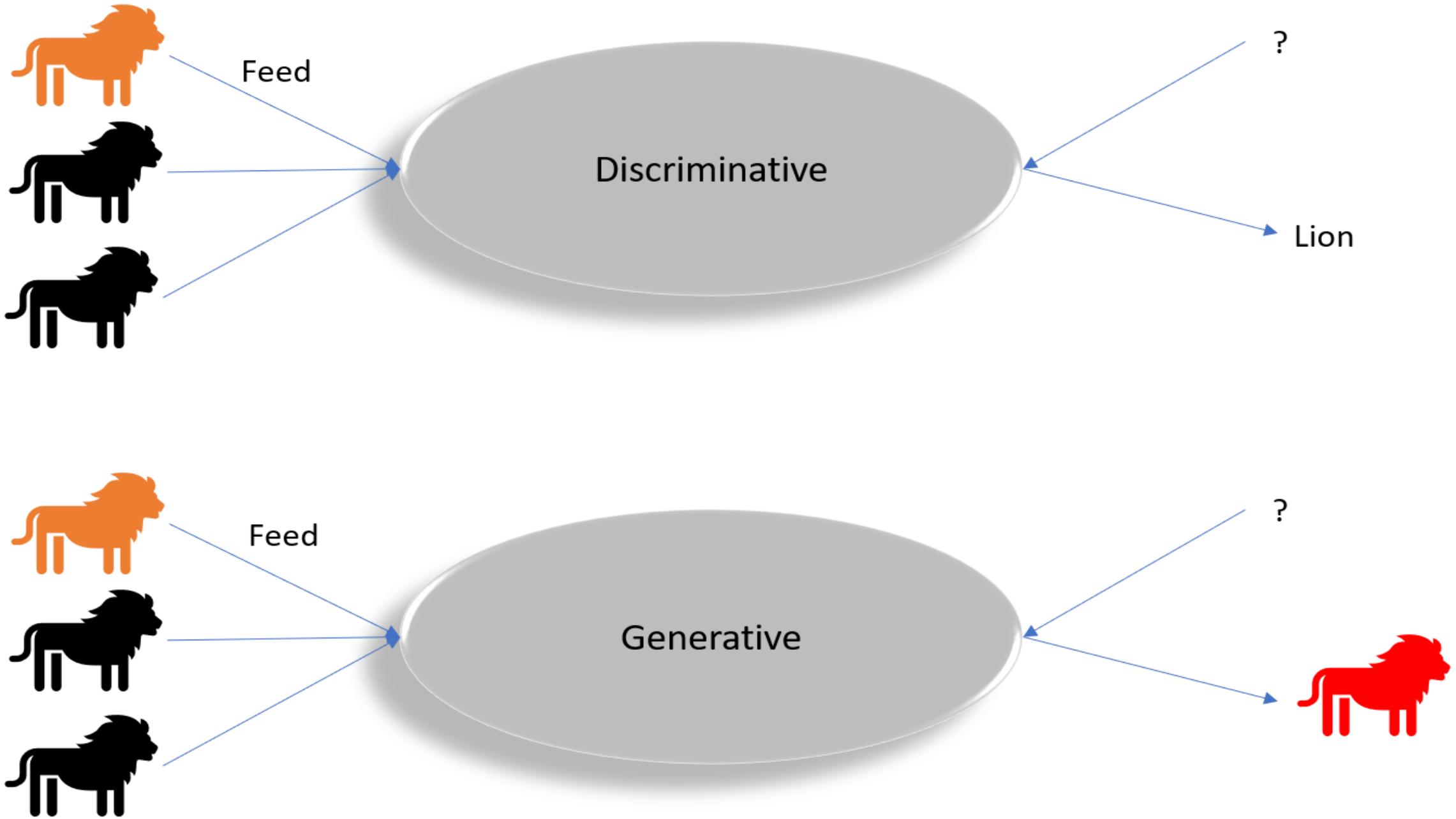
Tiger

Generative Model

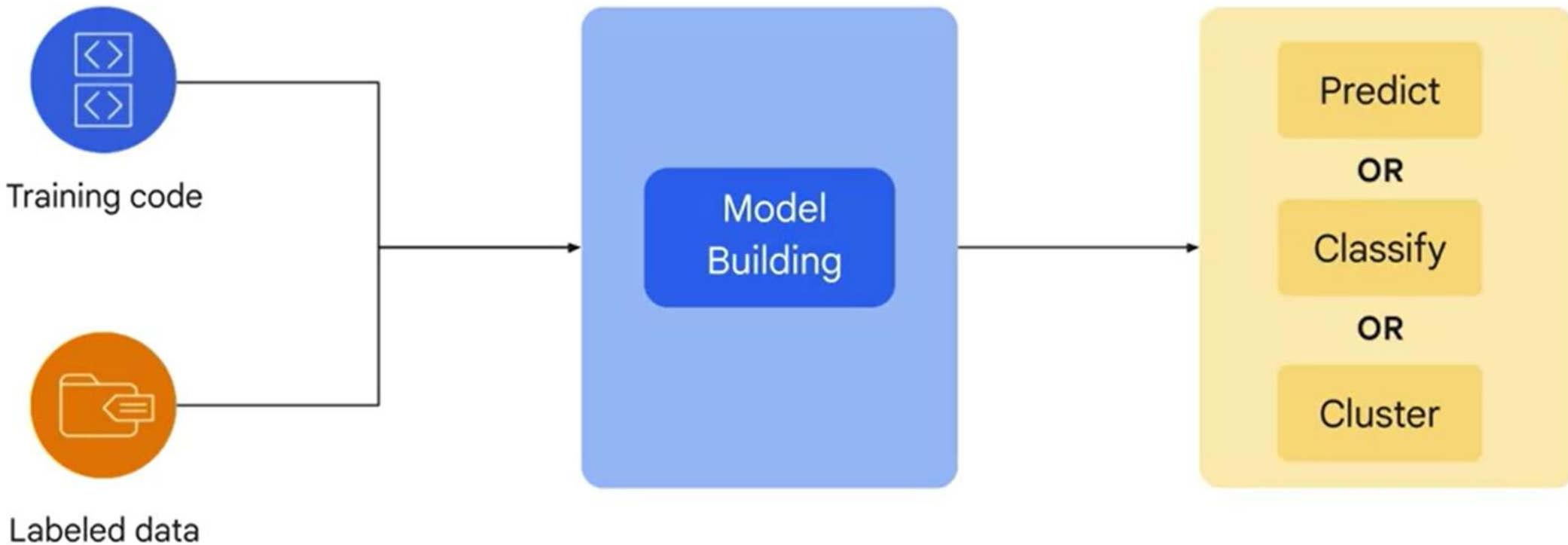
Image

Generate

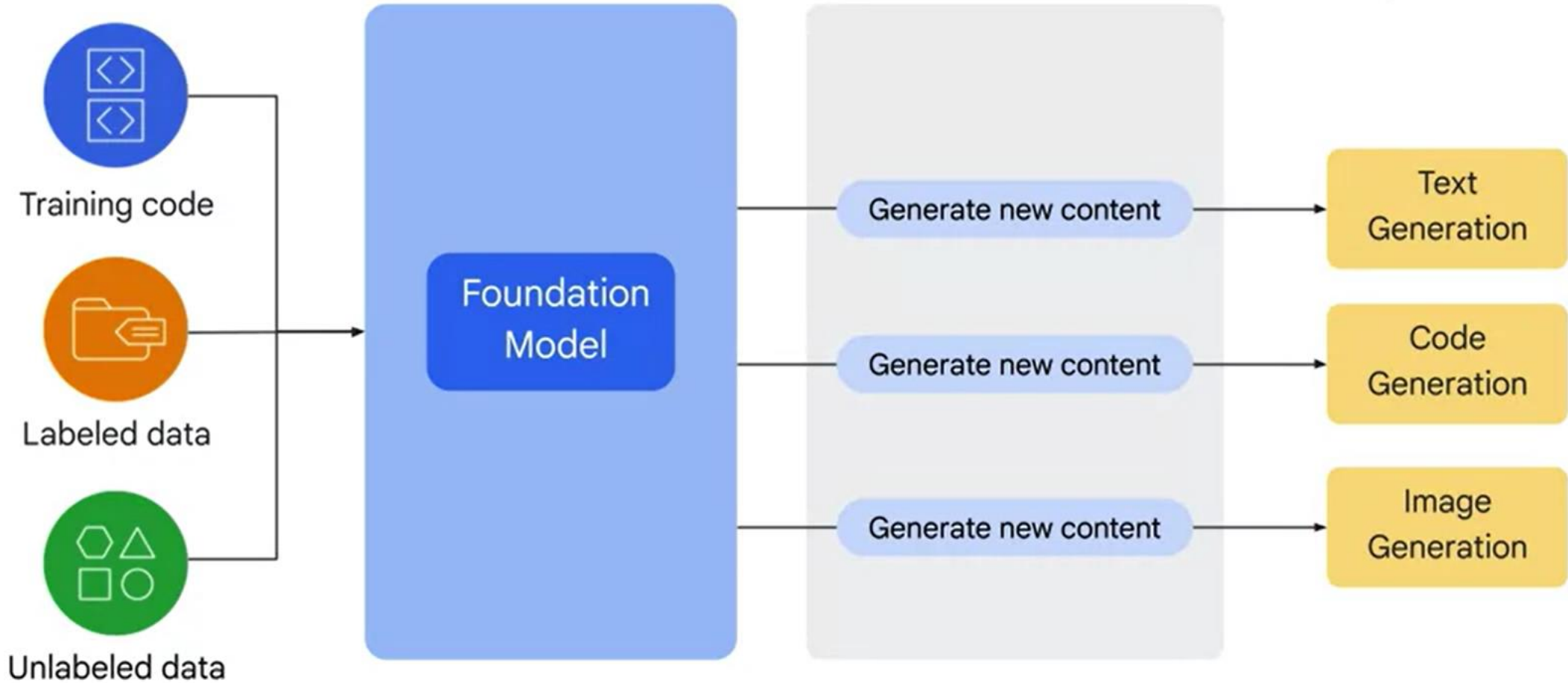
Generative Model (generates image of tiger)


Feed
Discriminative
?
Lion
Feed
Generative
?

Classical Supervised & Unsupervised Learning



Gen AI Supervised, Semi-Supervised & Unsupervised Learning



Thank you!