Large Language Models:
A Machine Learning Overview

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Why do they work so well NOW?

What changed?

What are the risks?

And which are likely to go away?

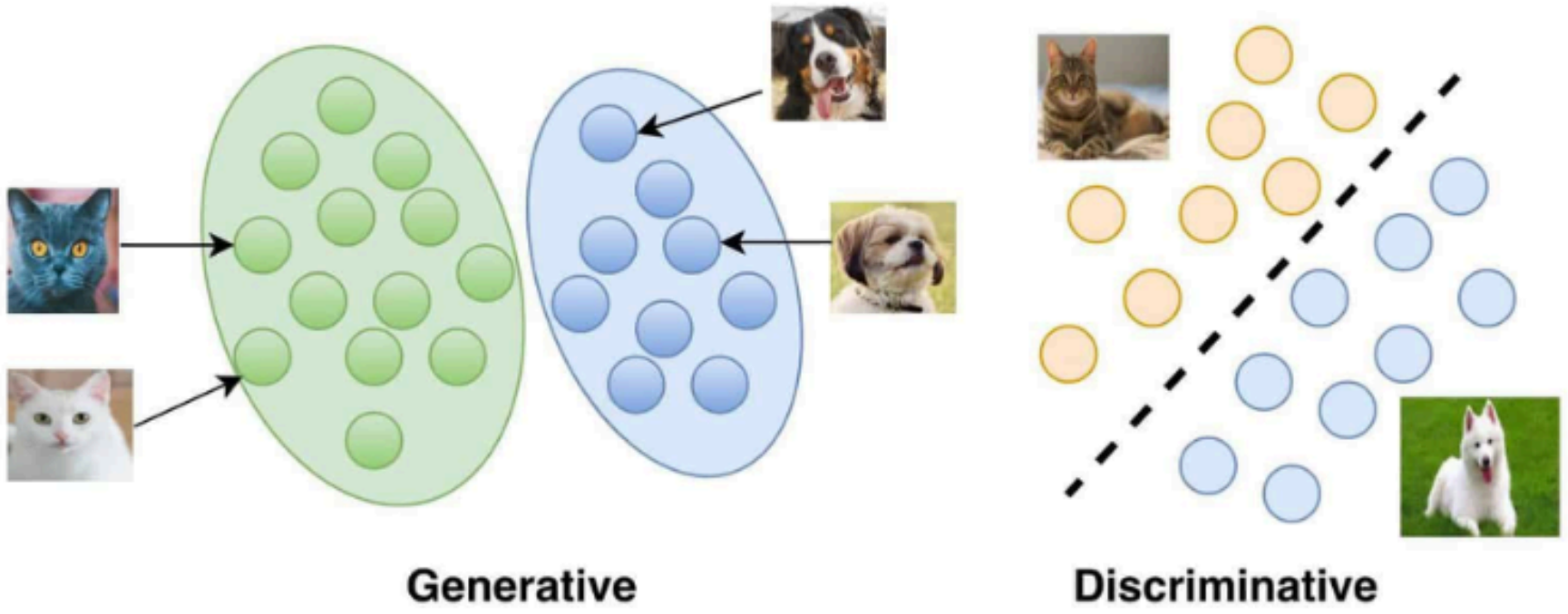
An AI typology

🎯 PREDICTIVE/DISCRIMINATIVE

Models that forecast outcomes based on historical data

✨ GENERATIVE

Models that create new content and responses


Generative
Discriminative


Cat
Dog
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The BIG idea behind ML: Build effective representations of unstructured data

Without Machine Learning

With Machine Learning

Teachable Machine Demo

🔗 teachablemachine.withgoogle.com

▶ Get Started > Image Project > Standard Image Model

Step 2: Upload images

Upload Training Images

Class 1

Using your webcam, take several photos of Person A

Class 2

Using your webcam, take several photos of Person B

Step 3: Model training

Train the Model

Step 4: Test the Model

Testing Instructions

In the preview pane, point your webcam at either Person A or Person B to verify that the model correctly identifies them. The confidence score should be high when the correct person is in view.

Key questions about machine learning models

🤔 Understanding:

Does the model truly understand concepts like "cat", or is it just pattern matching?

⚠ Concerns:

What ethical and practical considerations should we keep in mind?

🔄 Process:

How does machine learning fundamentally change our approach to algorithm development?

Gen AI asks a different question

Traditional ML vs. Gen AI

Instead of asking "Can we detect if this image contains a cat?", Gen AI asks "Can we create a realistic image of a cat?"

See examples at ThisPersonDoesNotExist.com - every face is AI-generated!

How good will it get?

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