Learner Space Submission

ML Problem Detective: Visit 5 different apps/websites you use and identify what ML they might be using

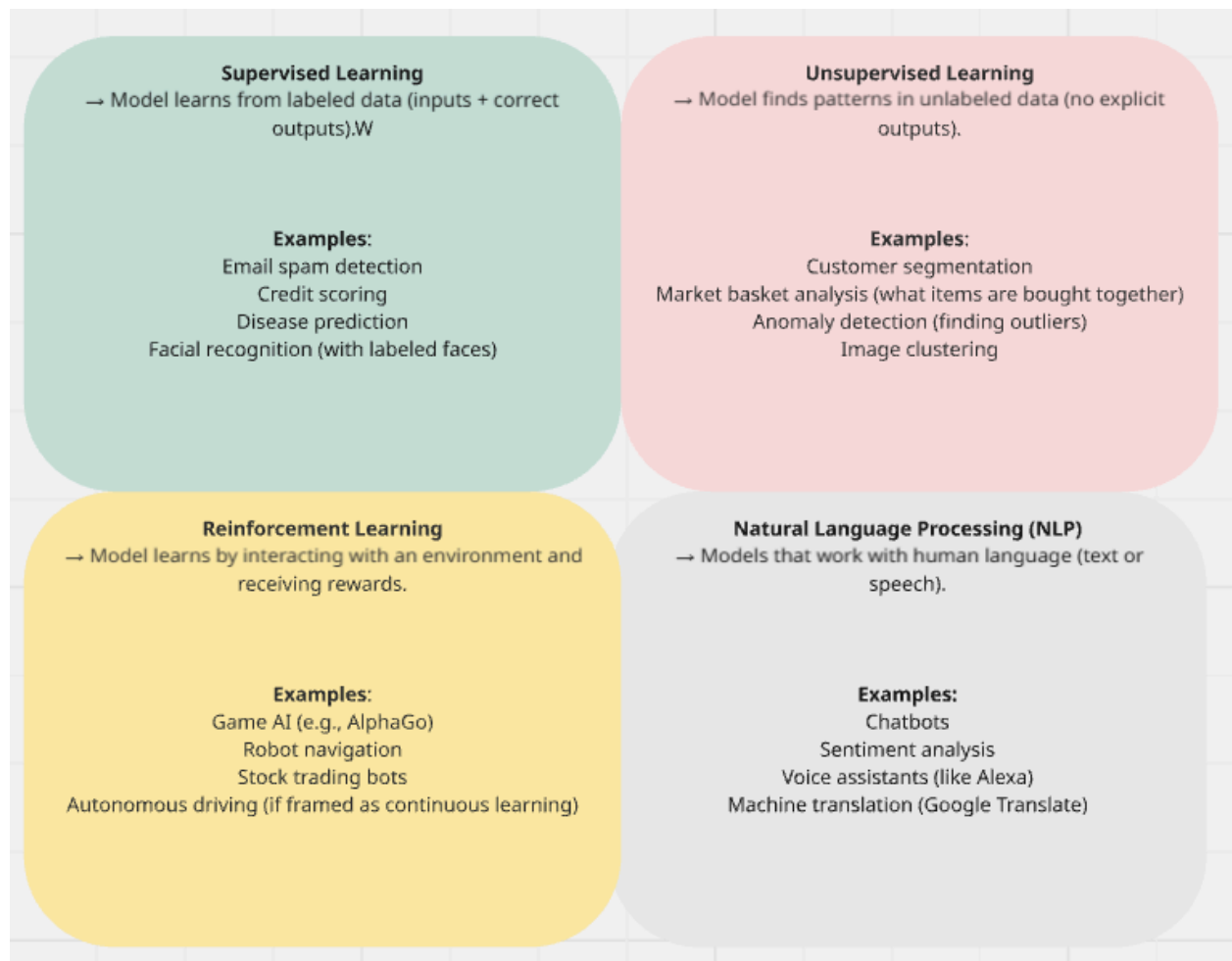YouTube – Recommender system for suggesting videos using collaborative filtering & deep learning.

Google Photos – Image recognition and clustering using CNNs to group people or scenes.

Amazon – Personalized product recommendations using user behavior data.

Google Maps – Traffic prediction using time-series data and ML models.

Instagram – Feed ranking and ad targeting using engagement prediction models.

Scenario Sorting: Create a digital board (using Miro or Jamboard) and sort 10 real-world problems into ML categories

Supervised Learning
→ Model learns from labeled data (inputs + correct outputs).W

Examples:
Email spam detection
Credit scoring
Disease prediction
Facial recognition (with labeled faces)

Unsupervised Learning
→ Model finds patterns in unlabeled data (no explicit outputs).

Examples:
Customer segmentation
Market basket analysis (what items are bought together)
Anomaly detection (finding outliers)
Image clustering

Reinforcement Learning
→ Model learns by interacting with an environment and receiving rewards.

Examples:
Game AI (e.g., AlphaGo)
Robot navigation
Stock trading bots
Autonomous driving (if framed as continuous learning)

Natural Language Processing (NLP)
→ Models that work with human language (text or speech).

Examples:
Chatbots
Sentiment analysis
Voice assistants (like Alexa)
Machine translation (Google Translate)

ML Ethics Minute: Choose one ML application (e.g., facial recognition, job filtering) and write a 2-line argument for and against its use

For:

Enhances public safety by aiding law enforcement in identifying criminals efficiently.

Against:

Risks mass surveillance, privacy invasion