

## 2) Machine learning problems:

1)

T: Receives the location of the store and the product name and outputs the classification of the popularity of the product (popular\not popular).

P: The error would be the rate of misclassified samples ("not popular" as "popular" and "popular" as "not popular")

E: The data would be a set of samples with labels (1-attributes: location of a shop and a product name, 2-label:popular\not popular).

2)

T: Receives images of the front road as the input and outputs the classification of the picture (obstacle in front\no obstacle). If the image shows an obstacle in front then there would be a command for speeding down otherwise the command would be to keep the speed at the same level.

P: The error would be the rate of misclassified images.

E: The data would be a set of images with and without obstacles with labels.

3)

T: Receives images from the conveyor belt after sorting the waste and outputs the classification of the picture (plastic waste\biodegradable waste\nmixed types of waste). If the waste is not correctly sorted by the mechanic arms, the image is classified as "mixed types of waste", then it can inform someone for further steps.

P: The error would be the rate of misclassified images.

E: The data would be a set of images of "plastic waste" and "biodegradable waste" and "mixed types of waste" on the conveyor belt with labels.