

Machine Learning AI



Amazon Kendra
Intelligent Search



Amazon Personalize
Personalized recommendations

Machine Learning Business Metrics



**Amazon Lookout
for Metrics**
Detect unexpected changes;
eg revenue performance and customer
retention, and identify root causes



Amazon Forecast
Build accurate forecasting models



**Amazon Fraud
Detector**
Identify potentially fraudulent online
activities

Machine Learning Vision



Amazon Rekognition

Analyze images and videos
and extract meaning

Machine Learning Language Services



Amazon Polly

Turn text into life-like speech



Amazon Transcribe

Add high quality speech to text
capabilities to your applications



Amazon Lex

Easily build conversational agents or
chat bots

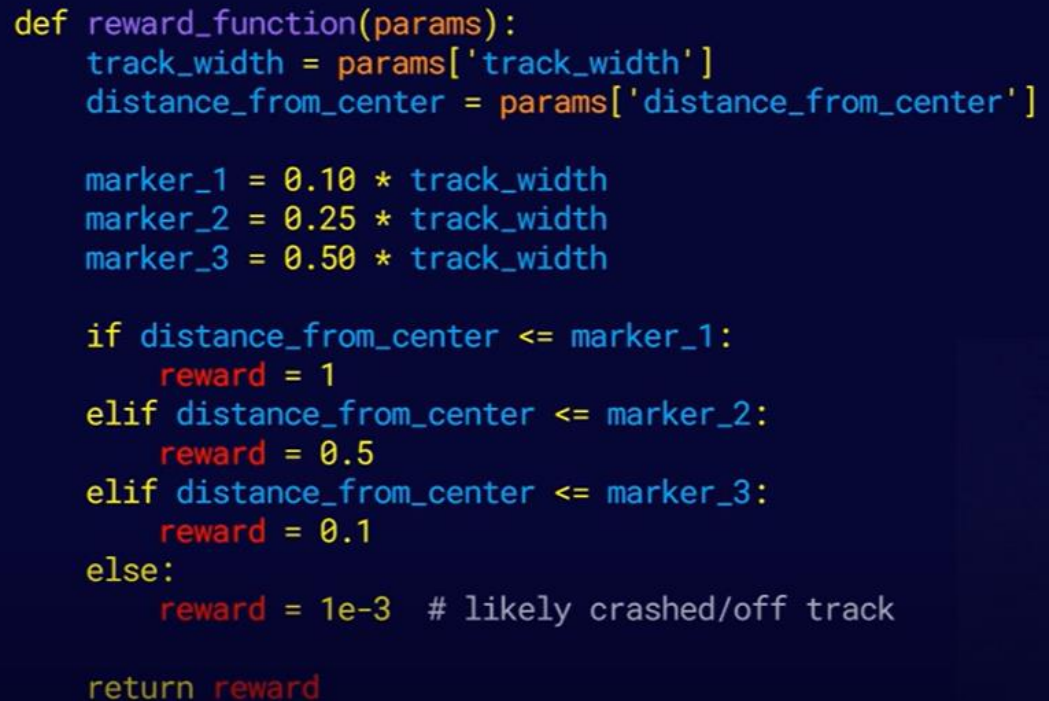
Amazon Recognition:

1. Object and scene detection
2. Image detection
3. Facial analysis
4. Face comparison
5. Text extraction
6. Personal protective equipment detection

Driving DeepRacer:

1. Creating a model
2. Reward function
3. Model training

Reward:



```
def reward_function(params):
    track_width = params['track_width']
    distance_from_center = params['distance_from_center']

    marker_1 = 0.10 * track_width
    marker_2 = 0.25 * track_width
    marker_3 = 0.50 * track_width

    if distance_from_center <= marker_1:
        reward = 1
    elif distance_from_center <= marker_2:
        reward = 0.5
    elif distance_from_center <= marker_3:
        reward = 0.1
    else:
        reward = 1e-3 # likely crashed/off track

    return reward
```

Amazon CodeGuru:

- Help review code
- Detect critical issues
- Find secure vulnerabilities
- Point out hard-to-find bugs

1. CodeGuru Purifier
2. CodeGuru Reviewr