

```

def reward_function(params):
    # Example of rewarding the agent to follow center line

    # Read input parameters
    all_wheels_on_track = params['all_wheels_on_track']
    speed = params['speed']
    track_width = params['track_width']
    distance_from_center = params['distance_from_center']

    #set the speed threshold based your action space
    SPEED_THRESHOLD = 2.5

    if not all_wheels_on_track:
        #penalize if the car goes off track
        reward = 1e-3
    elif speed < SPEED_THRESHOLD:
        #penalize if the car goes too slow
        reward = 0.4
    else:
        #high reward if the car stays on track and goes fast
        reward = 1.0

    # Calculate 3 markers that are at varying distances away from the
center line
    marker_1 = 0.1 * track_width
    marker_2 = 0.20 * track_width
    marker_3 = 0.5 * track_width

    # Give higher reward if the car is closer to center line and vice
versa
    if distance_from_center <= marker_1:
        reward = 1.0
    elif distance_from_center <= marker_2:
        reward = 0.5
    elif distance_from_center <= marker_3:
        reward = 0.1
    else:
        reward = 1e-3 # likely crashed/ close to off track

    return float(reward)

```