Briefing

Do not take this study on a mobile phone, the text and images won't display correctly.

Do not take this study if you have done a similar one recently.

You are free to leave at any time.

The study will take around 12mins.

You will be paid \$12 per hour for your efforts.

Thank you for your participation!

Block 53

Please Enter Your Prolific ID Here

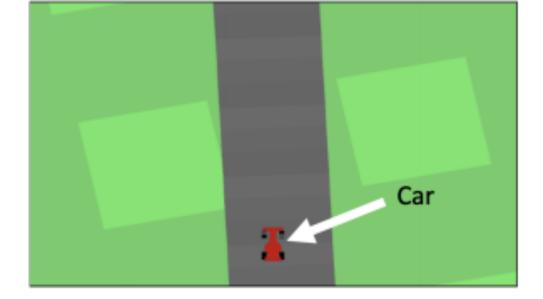
Introduction 1

Introduction

A *computer program* has learned to drive a car using four actions.

The four actions are:

- 1. Accelerate
- 2. Brake
- 3. Turn Left
- 4. Turn Right



Important: In all images you see, the car is constantly moving forward.

Introduction 2

Introduction

The car has learned to drive <u>very well</u> by practicing for <u>millions upon millions of</u> <u>simulations</u>.

Introduction acc

Introduction

The car can take the action <u>ACCELERATE</u> in situations it thinks needs it.

Introduction brake

Introduction

The car can take the action **BRAKE** in situations it thinks needs it.

Introduction Right

Introduction

The car can take the action **TURN RIGHT** in situations it thinks needs it.

Introduction left

Introduction

The car can take the action <u>TURN LEFT</u> in situations it thinks needs it.

Introduction combine

Introduction

Lastly, the car can combine actions, and will (for example) <u>TURN RIGHT</u> and <u>ACCELERATE</u> at the same time in situations that it thinks needs it.

Example 2

Example

So, for example, the car can turn right when it approaches a right turn.

Example 3

Example

As another example, the car can accelerate and turn right if it thinks would help.

Example 4

Example

Lastly, the car could also just brake if it thinks it would help.

Block 51

Introduction

It is up to you to look at the current situation, and guess **what actions** the car is going to take.

Your Task

Your Task!

However, <u>even if</u> the car has learned to drive well, <u>it cannot drive safely when it</u> <u>encounters situations which are EXTREMELY different to what it has</u> <u>experienced before.</u>

It is up to you to decide if this is happening.

So, there are **two main** things you want to consider when predicting **if the car will crash**:

- 1. Is the actions the car is going to take safe in the situation?
- 2. Is the current situation too different to the car's previous experiences that the car has no idea what to do?

Title

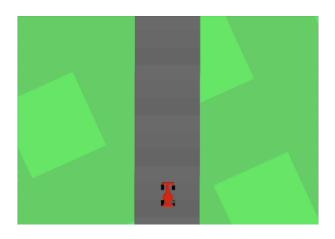
Press Next For The Task Instructions

Instructions 1

Instructions

Initially, note the car's situation and the road ahead it must try to navigate safely.

Step 1: Note the Situation



Instructions 2

Instructions

Secondly, recall the explanation of how the car works (this will NEVER change).

Step 2: Recall the explanation of how the car works:

Explanation: The car learned to drive very well by practicing for **millions upon millions of simulations**.

Instructions 3

Instructions

Lastly, *predict if the car will drive safely* through the road ahead, *and your confidence* in this prediction.

There are five options ranging from "Strongly Disagree" to "Strongly Agree".

Step 3:

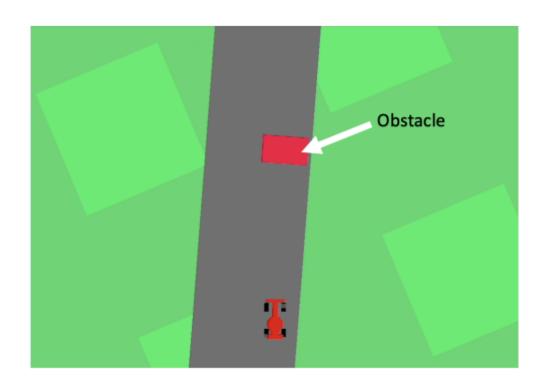
| | Strongly Disagree | | | | Strongly agree |
|--|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Red Obstacles

Red Obstacles

Lastly, there are red obstacles scattered throughout the roads

If the car crashes into these it will not drive safely.



Block 51

Remember, you are trying to predict what the <u>computer program</u> is going to do while driving the car!!!

You are <u>NOT</u> trying to convey how <u>you</u> <u>would personally</u> drive.

Sample question title

Sample Question

Now, please practice on the next question.

Practice Question

Practice Question



Step 2: Recall the explanation of how the car works:

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Please... consider answers... carfully

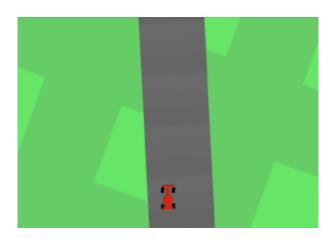
<u>Please</u> only participate in this study if you understand the instructions and are willing to <u>consider your answers carefully.</u>

Click to begin study

Click Next To Begin The Study

Question 1

Step 1: Note the Situation



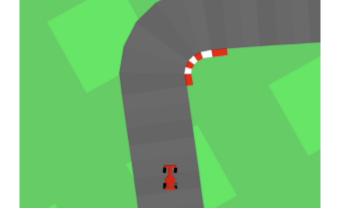
Step 2: Recall the explanation of how the car works:

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 3

Question



Step 2: Recall the explanation of how the car works:

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 5

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 7

Question

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

Explanation: The car learned to drive very well by practicing for **millions upon millions of simulations**.

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |



Question 9

Question

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

Explanation: The car learned to drive very well by practicing for **millions upon millions** of simulations.

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 11

Question



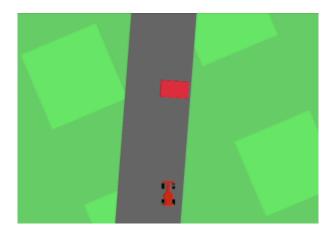
Step 2: Recall the explanation of how the car works:

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 13

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

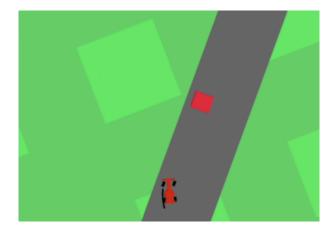
Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 15

Question

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

Explanation: The car learned to drive very well by practicing for **millions upon millions of simulations**.

Step 3:

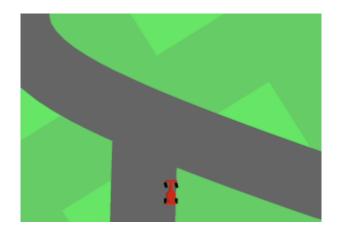
| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |

| | Strongly Disagree | | | | Strongl agree |
|-----------------------------------|----------------------|---|---|---|------------------|
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 17

Question

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

Explanation: The car learned to drive very well by practicing for **millions upon millions** of simulations.

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 19

Question



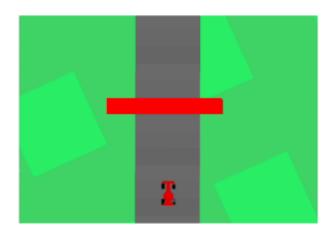
Step 2: Recall the explanation of how the car works:

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Attention Check

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 2

Question

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

Explanation: The car learned to drive very well by practicing for **millions upon millions of simulations**.

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |



Question 4

Question

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

Explanation: The car learned to drive very well by practicing for **millions upon millions of simulations**.

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 6

Question



Step 2: Recall the explanation of how the car works:

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 8

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

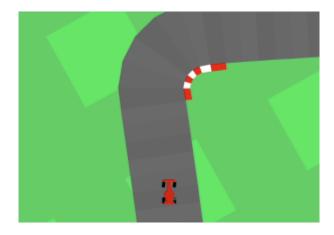
Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 10

Question

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

Explanation: The car learned to drive very well by practicing for **millions upon millions of simulations**.

Step 3:

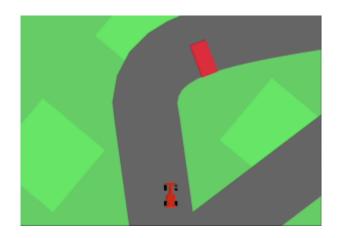
| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |



Question 12

Question

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

Explanation: The car learned to drive very well by practicing for **millions upon millions of simulations**.

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 14

Question



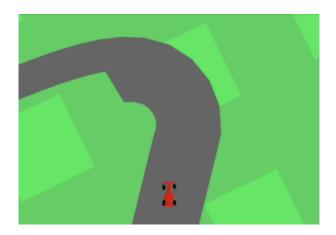
Step 2: Recall the explanation of how the car works:

Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 16

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

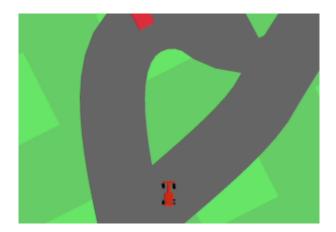
Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Question 18

Question

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

Explanation: The car learned to drive very well by practicing for **millions upon millions of simulations**.

Step 3:

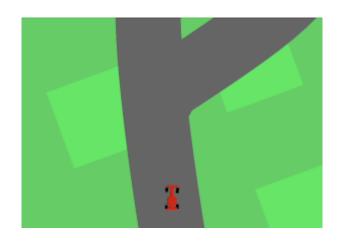
| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |



Question 20

Question

Step 1: Note the Situation



Step 2: Recall the explanation of how the car works:

Explanation: The car learned to drive very well by practicing for **millions upon millions of simulations**.

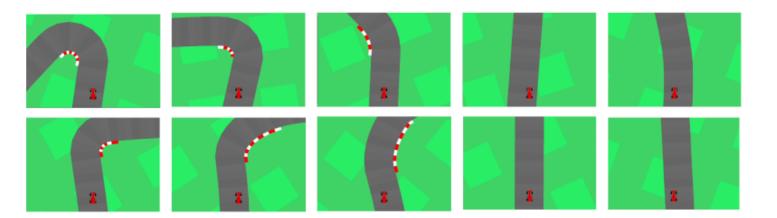
Step 3:

| | Strongly Disagree | | | | Strongly agree |
|---|----------------------|---|---|---|----------------|
| The car will drive safely in this situation | 0 | 0 | 0 | 0 | 0 |
| I am confident in this prediction | 0 | 0 | 0 | 0 | 0 |

Title safe situations

Thank You For Your Participation!
You Will Now Be Shown Where the Car Drove Safely

The Car Drove <u>Safely</u> In These Situations

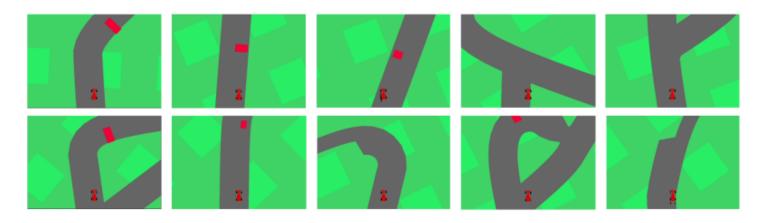


Title crash situations

Click Next To See The Situations The Car Crashed

Crash situations

The Car Did <u>Not</u> Drive Safely In These Situations



Please... fill out... 2 surverys... to finish

Next, Please Fill Out Two Short Questionnaires

SUS Questions

Questionnaire 1: The "System" in these questions is referring to the car and explanation.

| | Strongly Disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|--|----------------------|-------------------|-------------------------------|----------------|----------------|
| I think that I would like to use this system frequently. | 0 | 0 | 0 | 0 | 0 |
| I found the system unnecessarily complex. | 0 | 0 | 0 | 0 | 0 |
| I thought the system was easy to use. | 0 | 0 | 0 | 0 | 0 |
| I think that I would need the support of a technical person to be able to use this system. | 0 | 0 | 0 | 0 | 0 |
| I found the various functions in this system were well integrated. | Ο | 0 | 0 | 0 | Ο |
| I thought there was too much inconsistency in the system. | Ο | 0 | 0 | 0 | 0 |
| I would imagine that most people would learn to use this system very quickly | Ο | 0 | 0 | 0 | 0 |
| I found the system very cumbersome to use. | 0 | 0 | 0 | 0 | 0 |
| I felt very confident using the system. | 0 | 0 | 0 | 0 | 0 |
| I needed to learn a lot of things before I could get going with this system. | 0 | 0 | 0 | 0 | 0 |
| | | | | | |

NASA Questions

Low High
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

How mentally demanding was the task?

How physically demanding was the task?

How hurried or rushed was the pace of the task?

How successful were you in accomplishing what you were asked to do?

> How hard did ou have to work to accomplish your level of performance?

How insecure, discouraged, irritated, stressed, and annoyed were you?

Block 52

To finish the survey, can you please explain, in your own words, with as much detail as possible, why you think the car crashed sometimes?

Block 42

Debrief Page

Thank you for your participation, this study was designed to evaluate people's ability to