

RC Car Keyboard Controller - Explained for Kids

What This Program Does

This Python program runs on your computer. It watches your keyboard and sends drive commands to your RC car over Wi-Fi!

How It Knows What Car to Talk To

The program reads config.json to learn the car's hostname, like 'rc1'. It turns that into something like 'http://rc1.local' to send messages to the car.

What is an HTTP Request?

HTTP is a way for computers to ask each other for things, like a website. When you press the 'W' key, your computer sends a message like:

```
GET /api?cmd=forward&turn=center
```

The car sees this and goes forward.

How Key Presses Become Car Moves

The program uses a Python package called 'keyboard'. It checks over and over to see which keys are pressed:

- W = go forward
- S = stop
- A = turn left
- D = turn right

Then it sends the right command to the car. If you let go, it tells the car to stop or steer straight.

How Networking Works (Simply)

Think of your home Wi-Fi like a neighborhood. Each device (your computer, the car) has a house number (IP address).

When your computer wants to talk to the car, it sends a letter to that number.

In our case, the letter says something like 'please drive forward'.

RC Car Keyboard Controller - Explained for Kids

How It Keeps Talking

The program remembers the last command it sent. If nothing has changed, it doesn't send the same command again. This helps it run smoothly without spamming the car.