



Personas

In this project you will learn how role prompting is used to improve the responses from language models.

This project assumes you already understand the basics of how language models work.

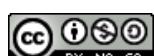
You will understand this project better if you do the “Language Models” worksheet before this one.

The image shows a Scratch project titled "Personas". The stage features several characters: a man in a suit, a pirate, a Frenchman, a boy in a striped shirt, a knight in armor, an alien, a poet, a child, and a knight. The script area contains the following code:

```
when green flag clicked
    clear context
    choose persona
    use [personas v] for initial context
    ask [Let's chat. When you work out who I am, click my picture. What shall we do?]
        forever
            ask [submit [prompt] using temperature] and top-prompt
            broadcast [set context v and wait]
```

The script palette shows the following blocks:

- Motion: show list [personas v], hide list [personas v]
- Looks: choose persona
- Events: when green flag clicked
- Sensing: save screenshot to costume, webcam image
- Operators: use [text] for initial context, Is the language model ready to use?
- Language model: submit [prompt] using temperature, clear context, use [text] for initial context



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If you are under the age of 13, please only use a small language model with supervision from a trusted adult.

Generative AI can sometimes generate text that isn't nice or appropriate.

1. Go to <https://machinelearningforkids.co.uk/>

2. Click on “**Get started**”

3. Click on “**Log In**” and type in your username and password

If you can't remember your username or password, ask your teacher or group leader to reset it for you.

4. Click on “**Projects**” on the top menu bar

5. Click the “**+ Add a new project**” button.

6. Name your project “**Personas**” and set it to generate text.

Click **Create**

The screenshot shows a web-based form for creating a new machine learning project. At the top, there's a navigation bar with links for About, Projects, Worksheets, Pretrained, Stories, Book, Help, and Log Out. On the right side of the header is a Language selection dropdown. Below the header, the main title is "Start a new machine learning project". The form fields are as follows:

- Project Name ***: The input field contains "Personas".
- Project Type ***: The dropdown menu is set to "generating text" (Beta).
- Language**: The dropdown menu is set to "English".
- Storage ***: The dropdown menu is set to "In your web browser".
- What do you want to teach the computer to do?**: A tooltip provides options:
 - To recognise words, sentences or paragraphs, choose "recognising text"
 - To recognise photos, diagrams or pictures, choose "recognising images"
 - To recognise sets of numbers or multiple choices, choose "recognising numbers"
 - To recognise voices or sounds, choose "recognising sounds"
 - To predict numbers, choose "predicting numbers"
 - To generate new text with a language model, choose "generating text"
- CREATE** and **CANCEL** buttons at the bottom right.

7. You should see your new project in the projects list. Click on it.

8. Click on Small, and then click Next

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Type of language model

language model

Computers can look for patterns in large numbers of documents. Language models generate text by using those statistical patterns to predict what word could come next. Creating a **toy** language model will show how this works, and see the types of patterns computers look for (in documents you choose yourself). Configuring a **small** language model will show you how to use patterns found in millions of documents. All of this will help you to understand how **large** language models work in the real world.

Next

9. Choose a model architecture to use *There are several models to choose from.*

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Type of language model

language model

Model architecture

Smol
Qwen
Tiny Llama
Llama
Phi

Next

Larger and more complex models can generate better text.

But larger models:

- * *will take longer to download*
- * *will need more storage space on your computer*

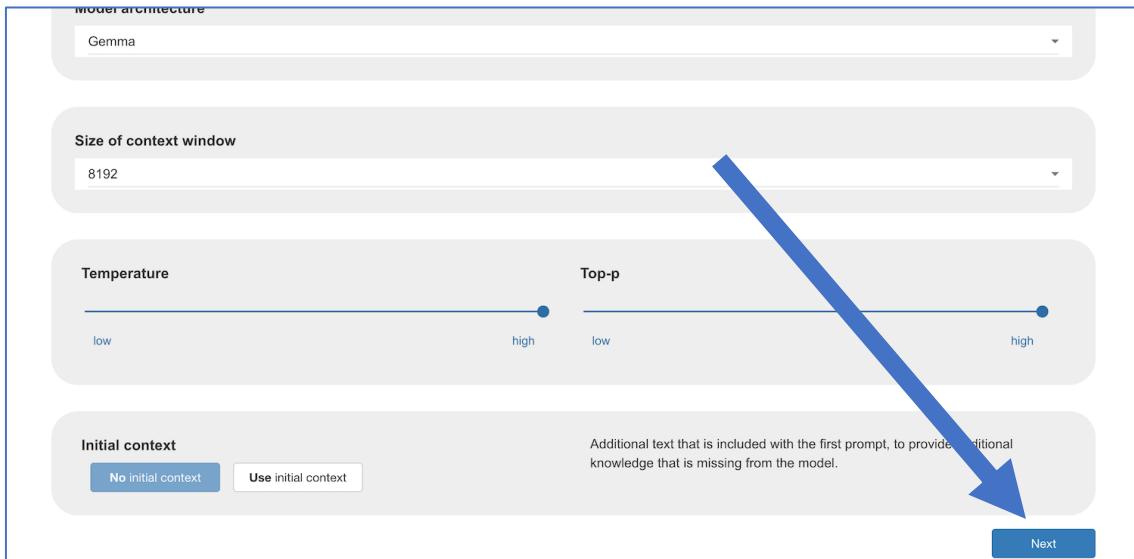
And more complex models:

- * *will need a faster and more powerful computer to run*

Choosing a different model from other students around you is a good idea as it will let you compare how different models behave.

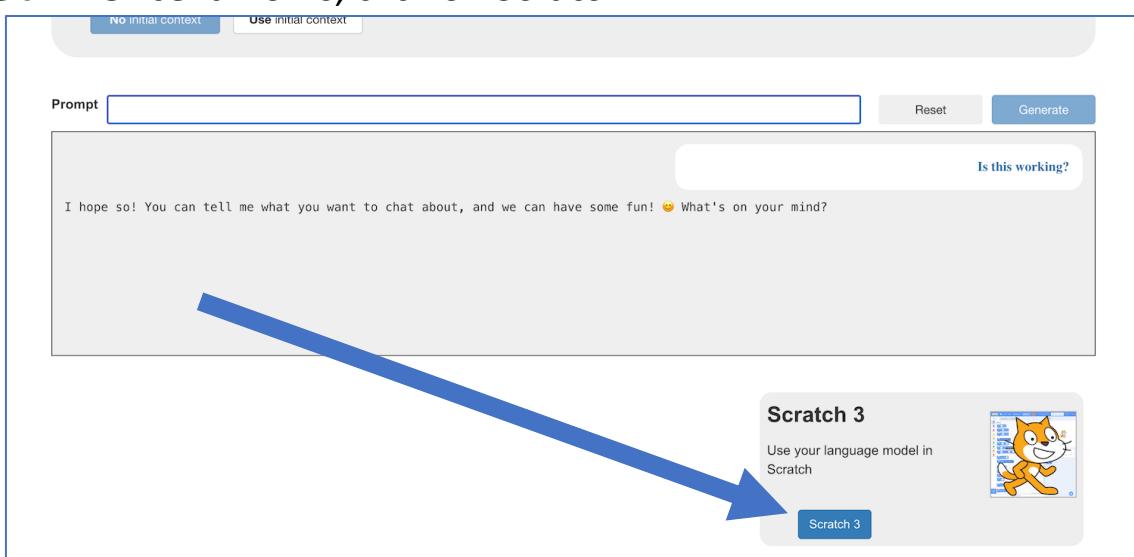
*For the screenshots in this worksheet, I chose **Gemma***

- 10.** Click **Download**
- 11.** Choose **8192** as the context window size, then click **Next**
- 12.** Leave the high temperature and Top-p value, then click **Next**
- 13.** Select **No initial context**, and click **Next**

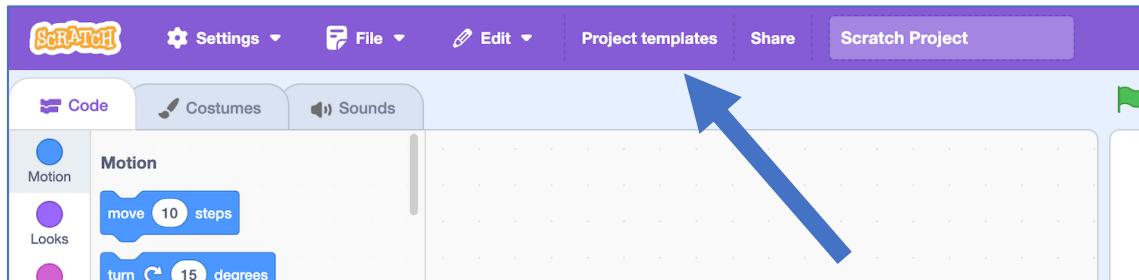


- 14.** Ask the model a question to verify that it works on your computer
If it doesn't work, choose a smaller model and/or a smaller context window size, and then try again.

- 15.** Once it works, click on **Scratch**



16. In the Scratch window that opens, click on **Project templates**



17. Click on the **Personas** template

There are six people in this template:

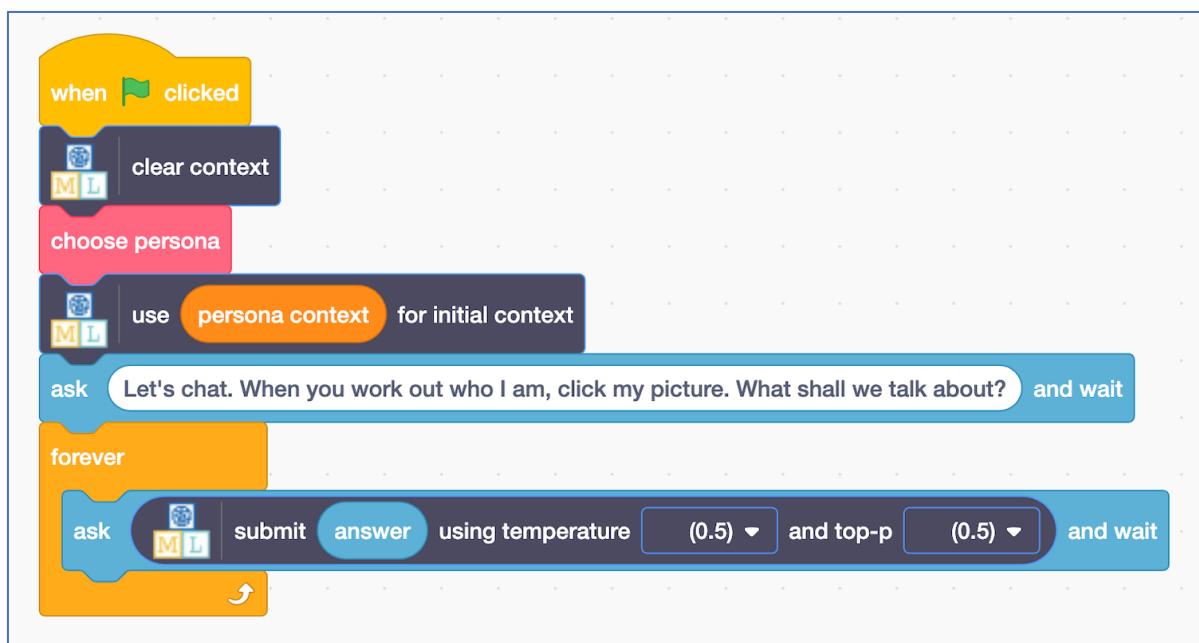
- * a football commentator
- * a pirate
- * a French person
- * an alien
- * a poet
- * an angry, stubborn child

18. Add this code to the **quizmaster** Sprite

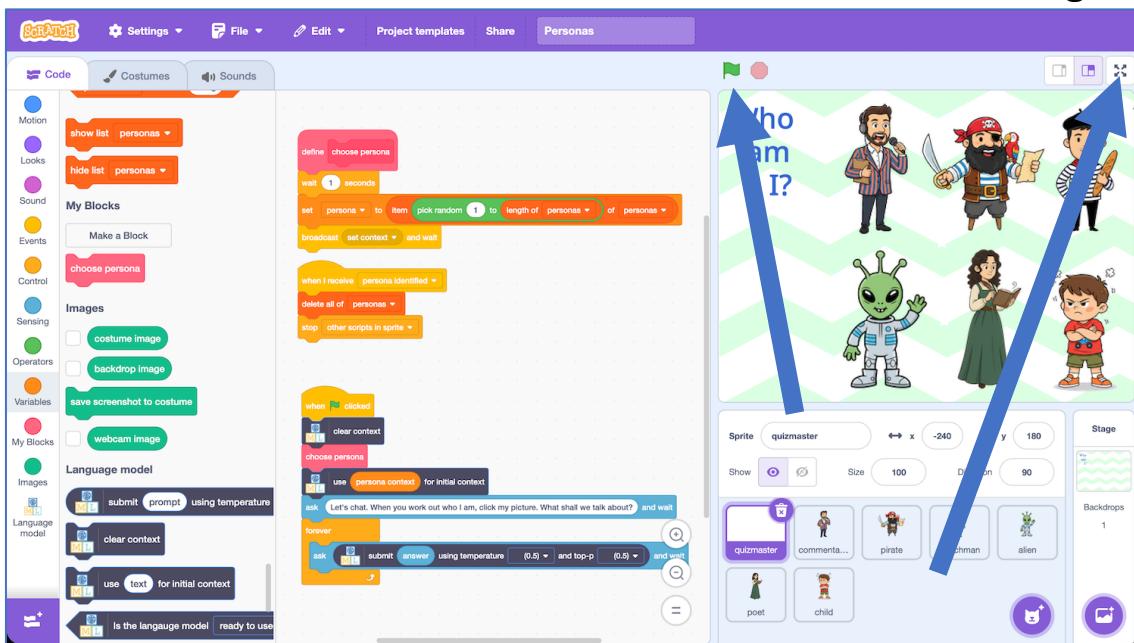
This code chooses one of the six people at random.

Then it puts the description of random person in the context for your language model.

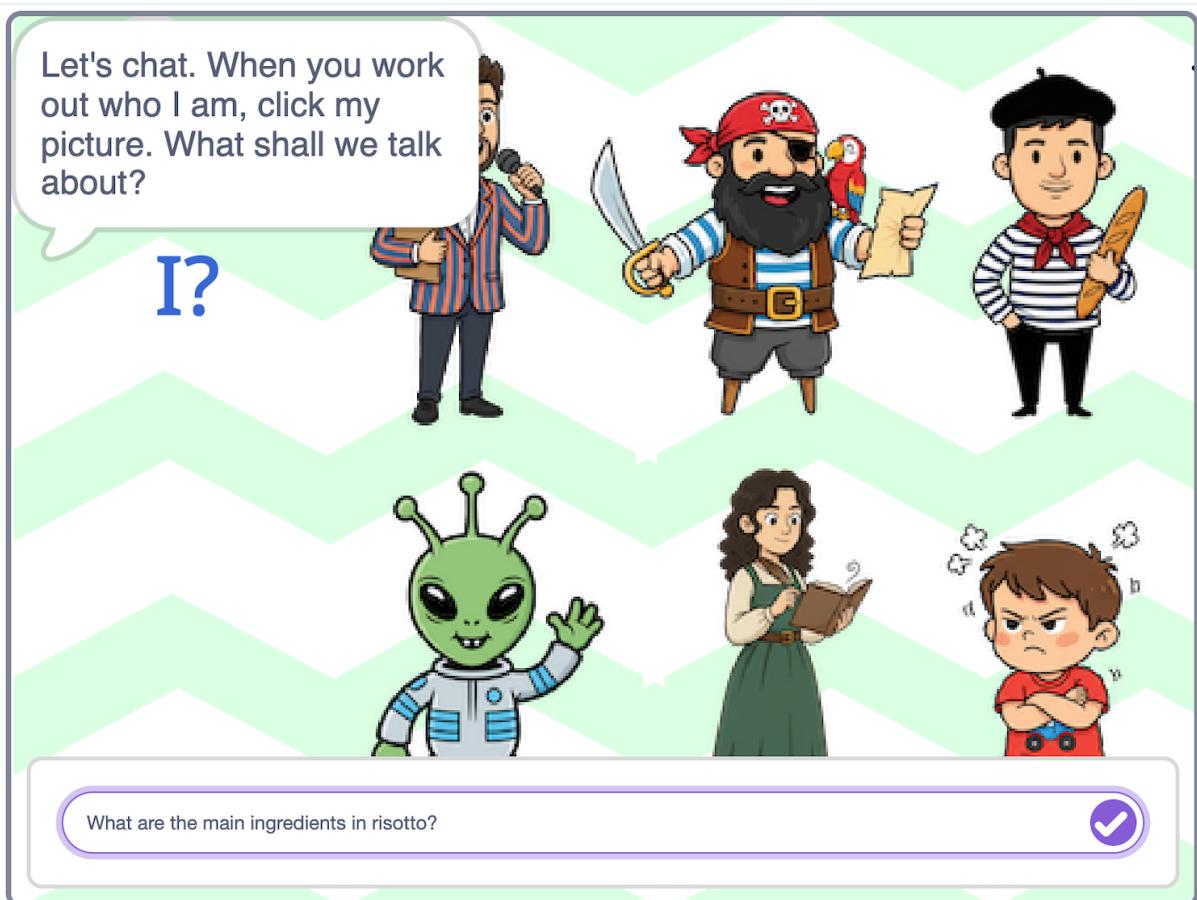
It then starts up an endless loop so you can have a conversation with the model, with that persona description in the context.



19. Click the full-screen button and then click the Green Flag



20. Have a conversation with the model about anything that you like.



21. Try to work out which persona the model has been given.

Risotto's a dish, a creamy delight,
With rice and broth, a culinary flight.
Onions and garlic, a savory blend,
With wine and cheese, a taste to transcend.



Is it a healthy thing to eat?



22. When you think you know the persona, **click on their picture**.

If you are wrong, their picture will disappear, and you can keep going.

Risotto can be a healthy choice, you see,
With veggies and broth, a balanced decree.
But remember, portion size is key.



What would be a good side dish to go with it?



If you are correct, they will say you are right, and the conversation ends.



23. Click on the **Green Flag** and try that again

Try having the same conversation again... but this time the model will have a different persona in the context

What have you done?

You are interacting with a language model, which can generate text in response to the prompts that you give it.

You created code to add the description of a persona in the context of the model before starting each conversation.

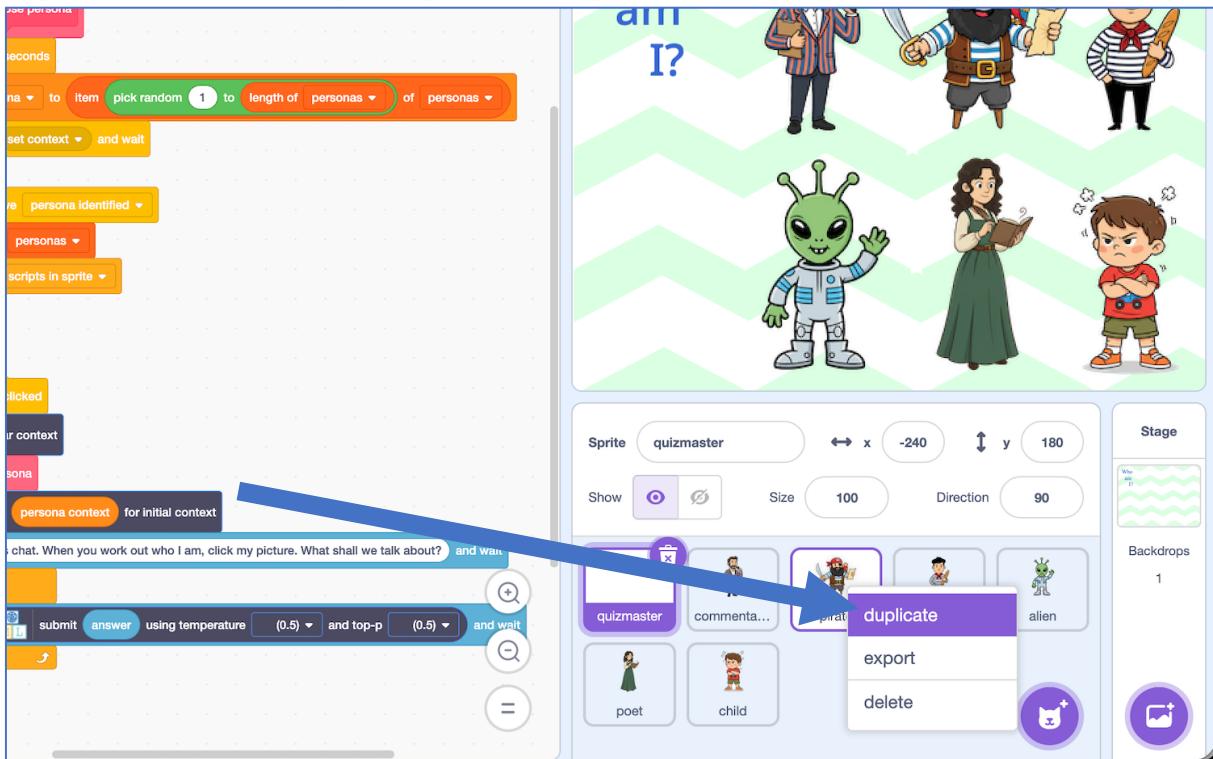
That context changes the way that the model generates answers that it gives you, even when you ask the same questions.

This is sometimes described as **role prompting**.

Next, you'll add your own persona to the project

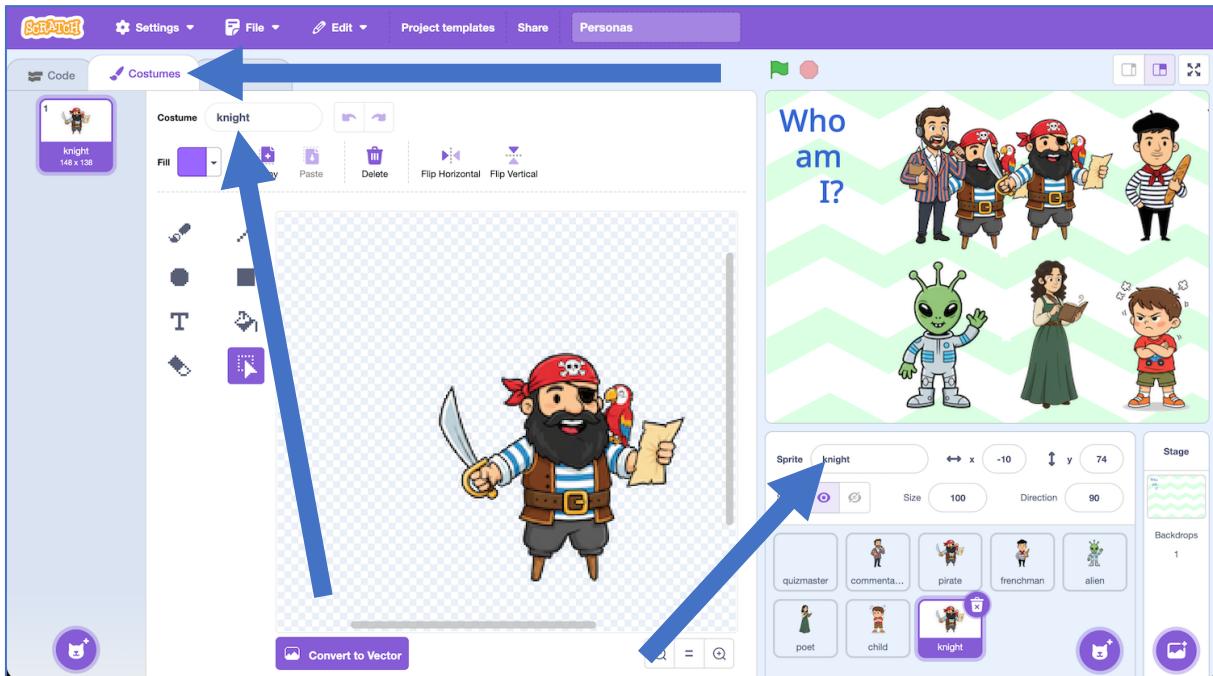
24. Duplicate one of the personas

*Right-click on one of the persona sprites and choose **Duplicate***



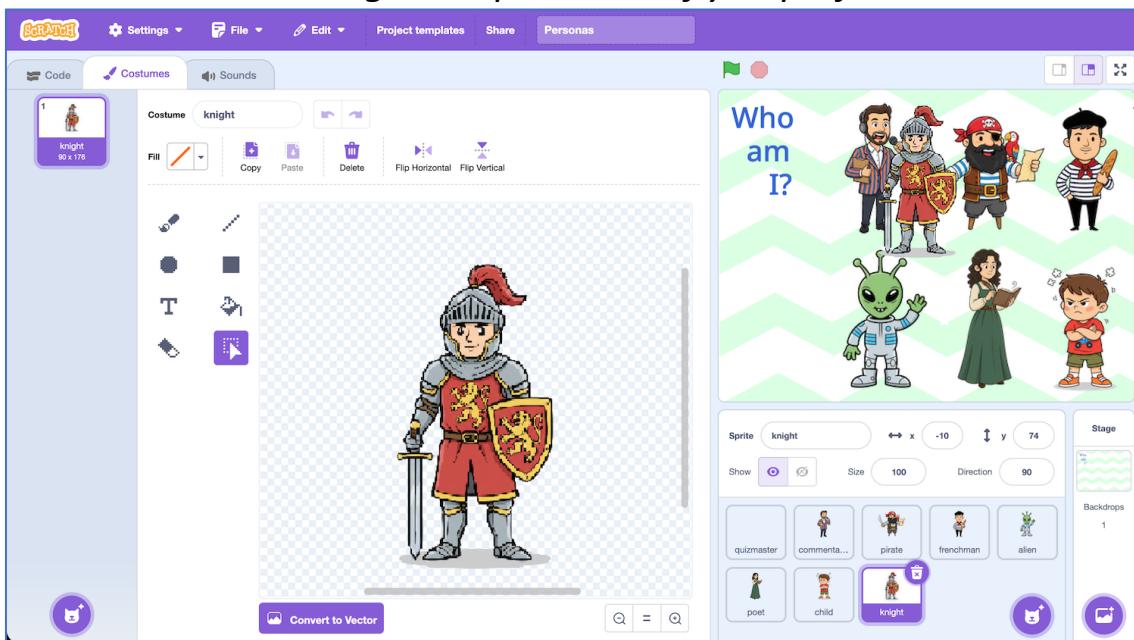
25. In the **Costumes** tab, change the name of the sprite **and** costume to a different person you want to add to the game

I'm adding a medieval knight, but you can choose your own idea



26. Add an image for your persona

You can draw an image, or upload one if you prefer



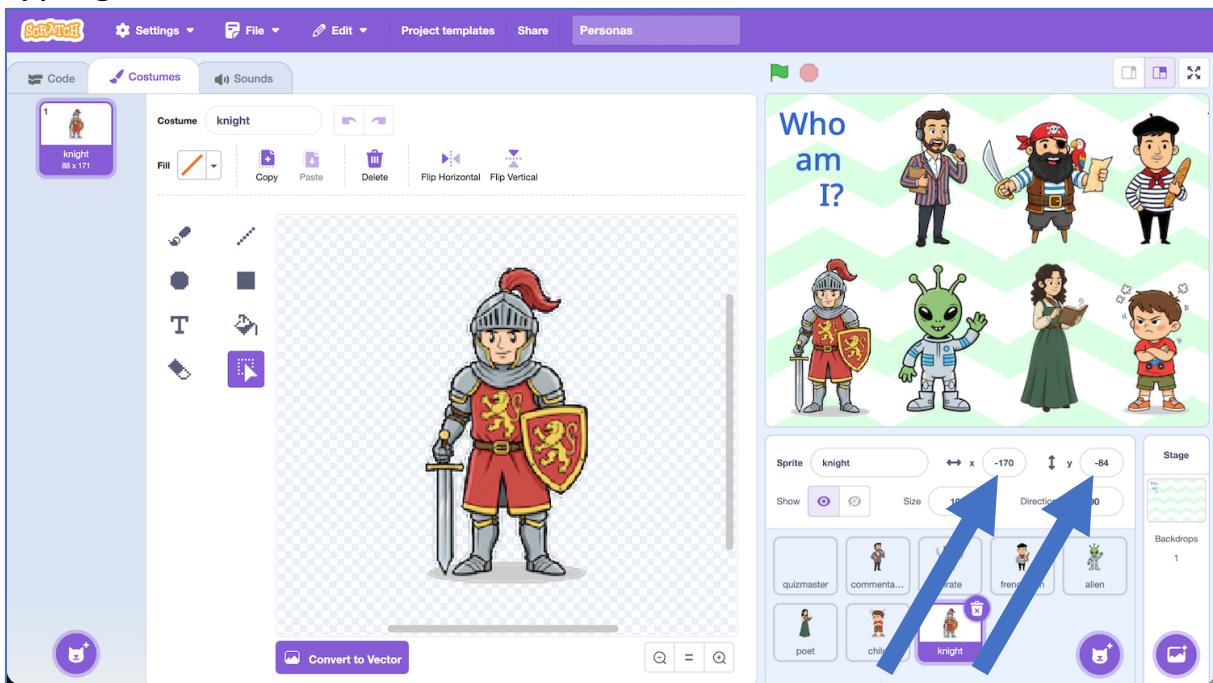
27. Type in the coordinates for the new persona

x = -170

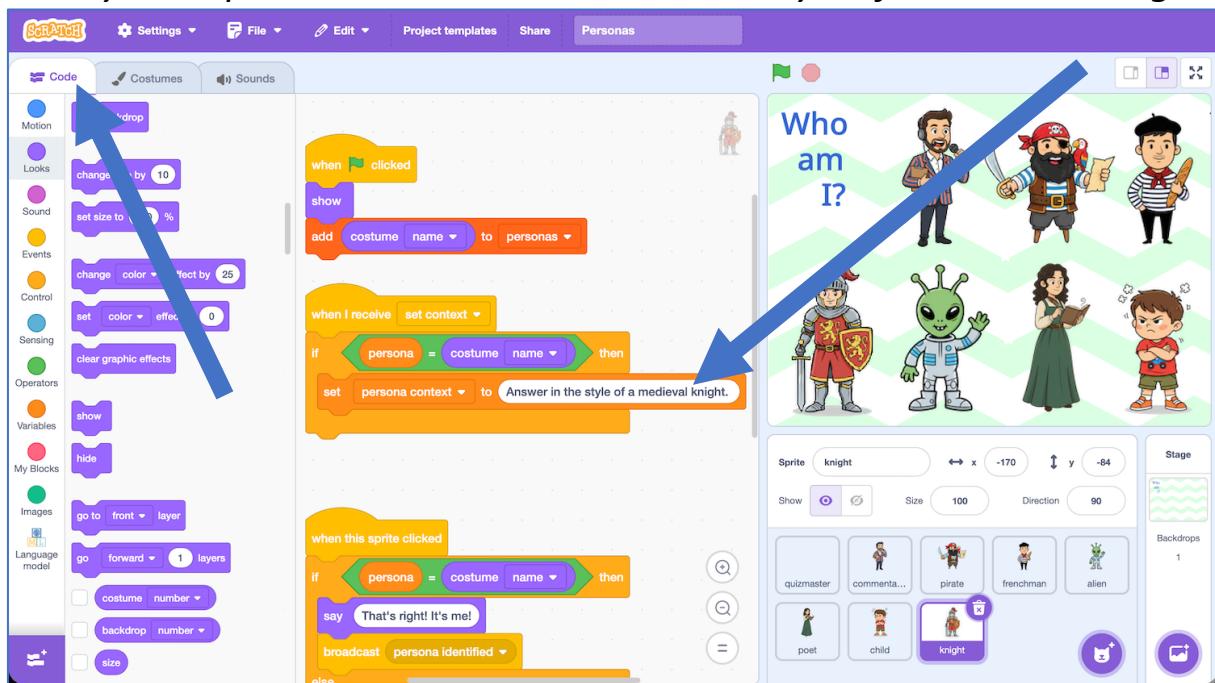
y = -84

It is difficult to drag the sprite to the new location because it has code that will hide when you click on it.

Typing in the new location is easier.

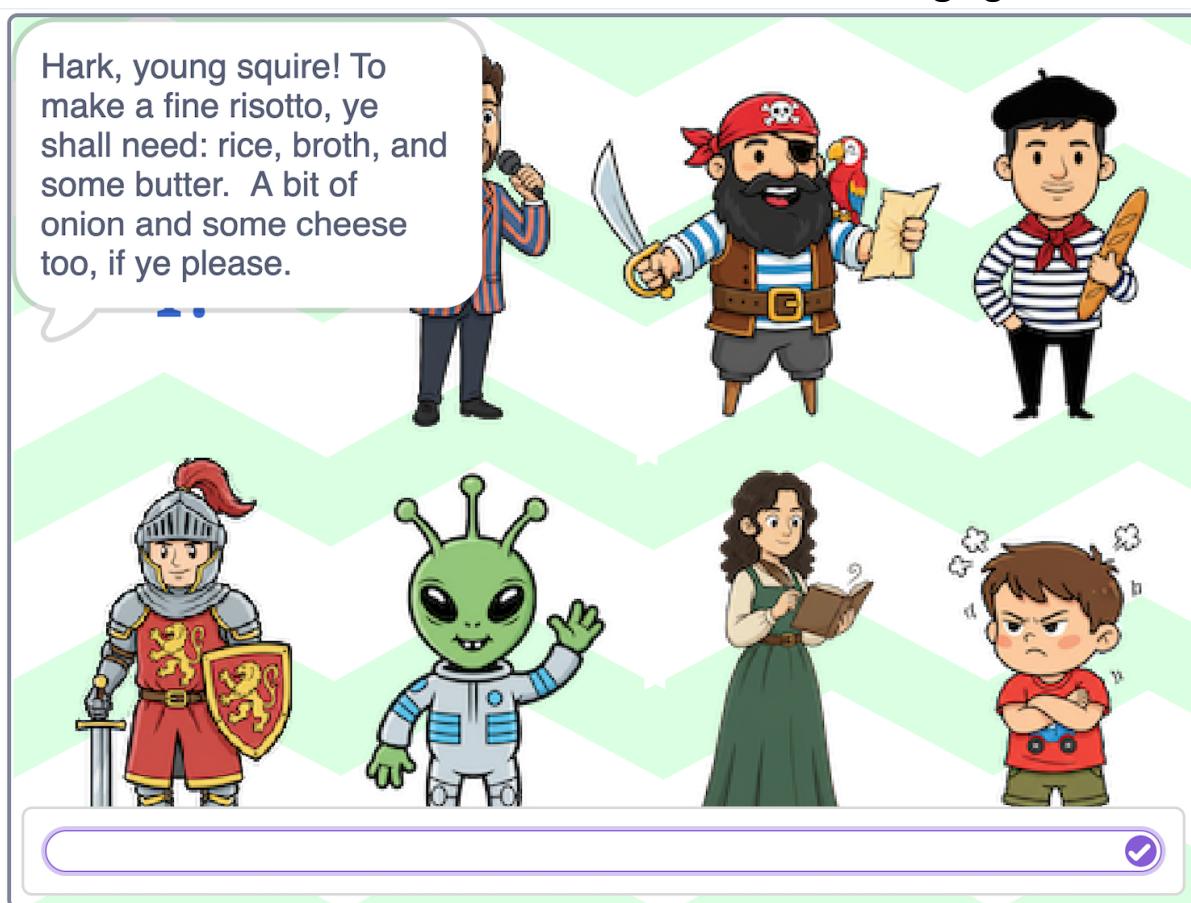


28. In the **Code** tab, update the **persona context** for your new character
For my example, I have used "Answer in the style of a medieval knight."



29. It's time to test!

Click on the **full-screen** button and then the **Green Flag** again



What have you learned?

You asked a language model the same questions but got very different answers, even though you are using the same model and code.

Sometimes it sounded like a pirate, sometimes it sounded like an alien. Why?

Language models are good at reading text, spotting patterns, and predicting what word should come next.

Before it answers, we give it a special instruction called a **role prompt**.

A role prompt is like saying: “Pretend you are a pirate when you answer.”

The AI doesn’t become a pirate, but it has read lots of pirate-style writing, so it can copy the pattern (using pirate words and pirate phrases).

The AI hasn’t changed. Only the instructions it was given changed.

The answers it gave felt very different because of this.

People use role prompts all the time. For example:

Helper mode : “Answer like a friendly customer service assistant”

Tutor mode : “Act like a calm and patient tutor. Don’t give me answers, coach me to work out the answer for myself step by step.”

When you use AI tools, you can get **better answers** by:

- * saying **who** the AI should pretend to be
- * saying **how** it should talk
- * saying **who** it is talking to

For example, compare:

“You are a friendly science teacher.
Explain gravity to a Year 5 pupil in a UK school.
Use language from the UK Key Stage 2 National Curriculum.”

“Explain gravity”

The first prompt will give a more useful answer than the second prompt, even though they are the same question.