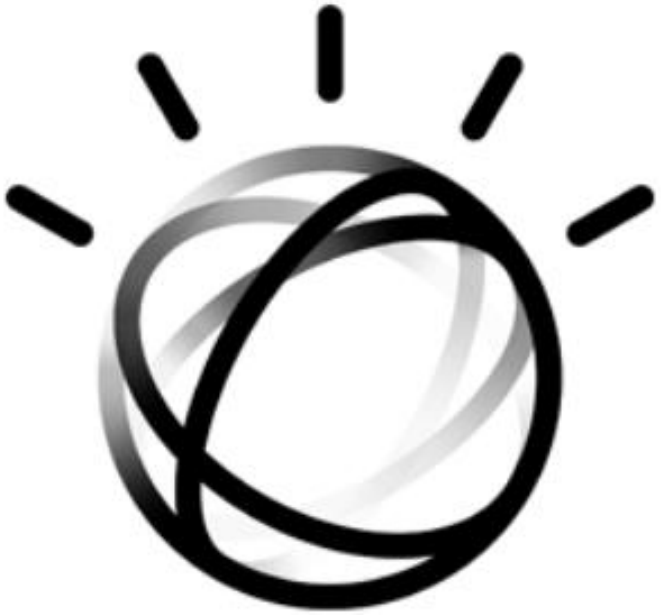
INTRODUCTION TO CHATBOTS

USING IBM WATSON



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20 DEC 2021

DORSEYVILLE MIDDLE SCHOOL

TODAY'S SESSION

Do you use Alexa, Siri, Cortana, or Google Assistant? Chatbots and virtual assistants are now a way of life. Do you want to build your own?

Join Deepika for a hands-on activity session to learn what is a chatbot, how artificial intelligence is changing how we interact with computers, and finally how to build your own chatbot using Scratch and IBM Watson.

LET'S GET TO KNOW EACH OTHER!

Introductions

- Your Name
- Your Grade
- A word or phrase you associate with

Artificial Intelligence

QUICK SURVEY

Programming

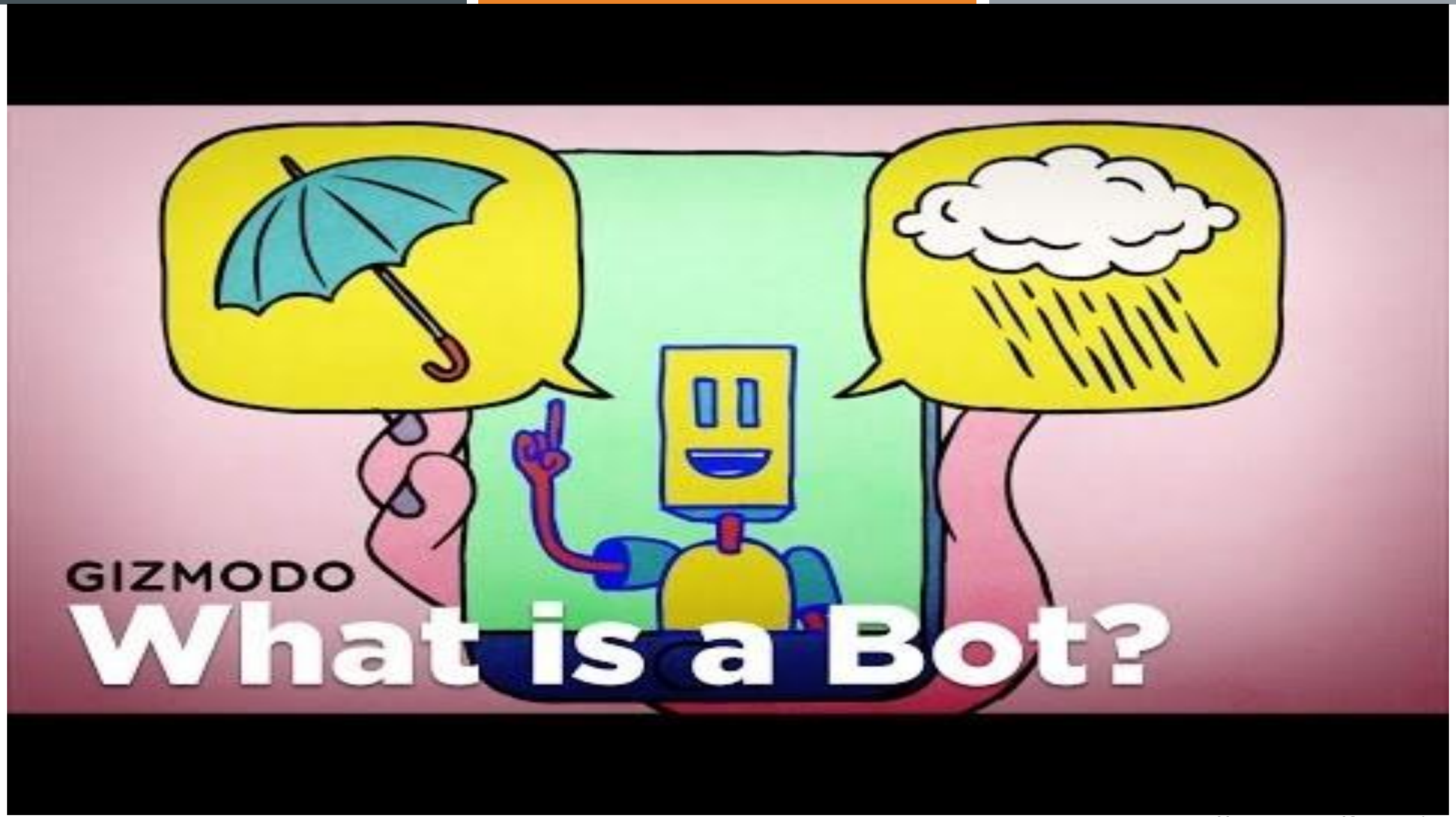
- Who has coded before?
- What computer languages?

Scratch

- Who has used scratch before?
- What did you build?

WHAT IS A CHATBOT?

- Computer application or program that simulates human conversation
- Examples of chatbots
  - Siri, Alexa, Google, Bixby, Cortana, …
- Who has done programming?
  - Aspects of Traditional Programming
- What's different with how you interact with a chatbot?



https://youtu.be/fEbzk4vTHsQ

BUILDING BLOCKS OF A CONVERSATION

Intent Purpose behind a statement

Entities Nouns in a sentence

Dialog Conversation flow between the user and a bot

YOUR GOAL

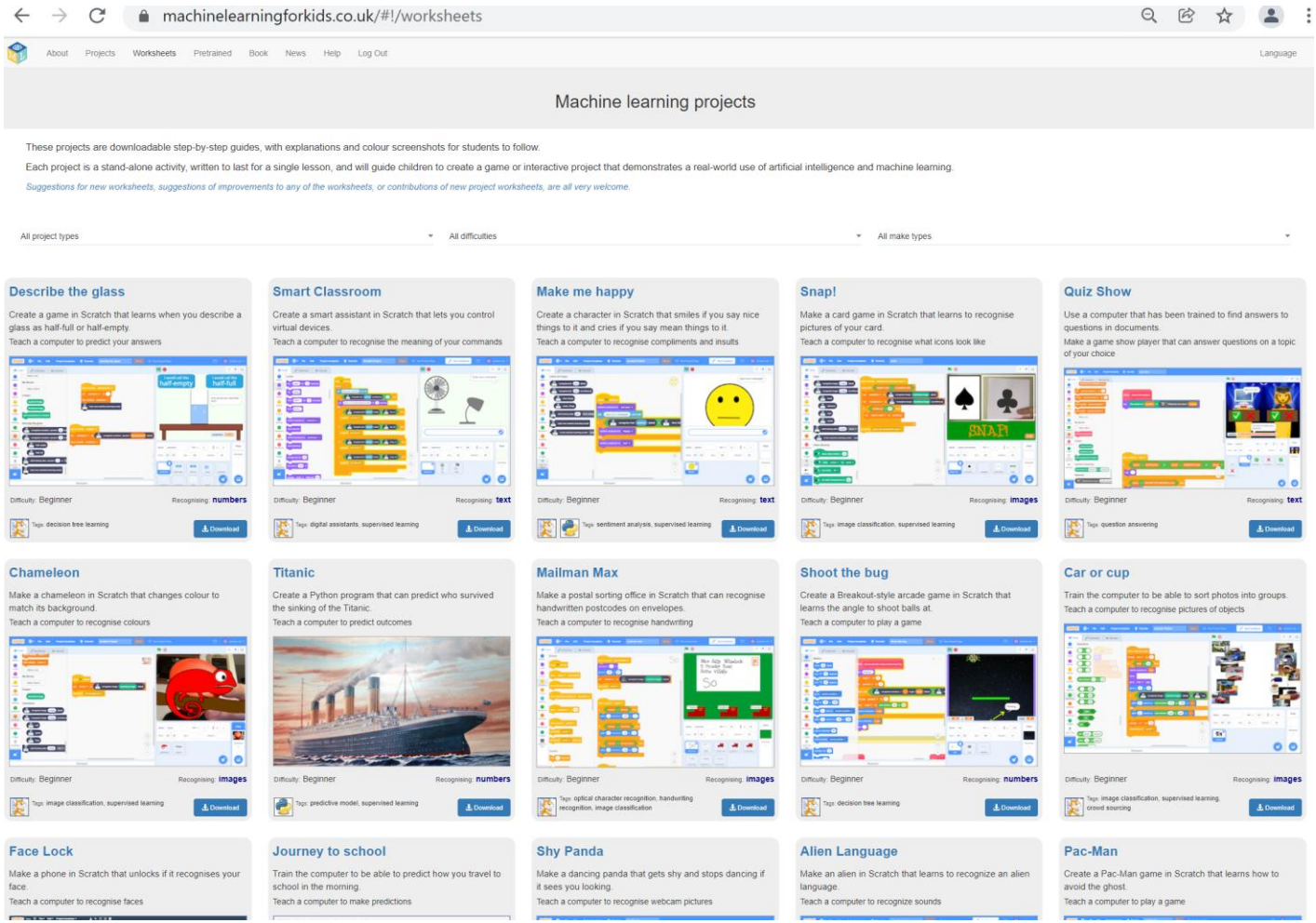
BUILD A CHATBOT TO ANSWER QUESTIONS ON A SPECIFIC TOPIC

HANDS-ON ACTIVITY

- Decide a topic for your chatbot
  - Place (Fox Chapel), Animal (Dinosaurs), Organization (DMS), History (Romans), etc.
  - Example topic: Owls
- Decide on at least 5 categories of questions you want to cover
  - Example: Food, Countries, Lifespan, Species, Size
- Train the model with at least 5 examples of questions in each category
- Open Chatbot (Owls) Scratch Project Template
- Edit the project to reflect your topic and connect to your model
- Test the Scratch Project
- Inspect and Adapt!

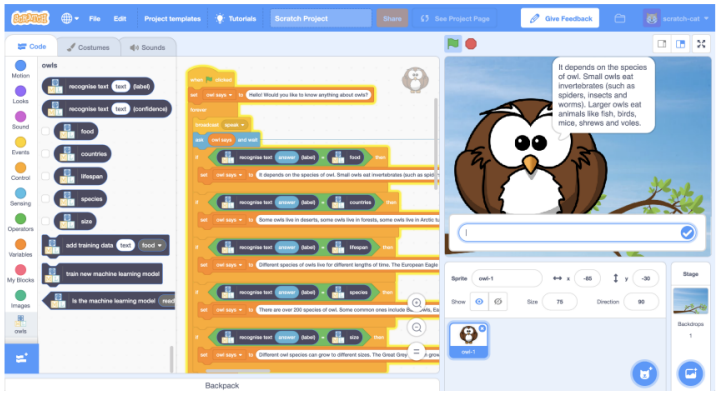
LET'S GET STARTED!

https://machinelearningforkids.co.uk



Chatbots

In this project you will make a chatbot that can answer questions about a topic of your choice.



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1. Decide on **a topic** for your chatbot
Choose something that you know well enough to be able to answer questions about.
It could be a place (e.g. The town where you live?)
It could be an animal (e.g. Tigers? Dinosaurs?)
It could be an organisation (e.g. Your school)
It could be something from history (e.g. Vikings? Romans?)
*For the rest of this worksheet, I'll be using **owls***

2. Think of **five things** someone might ask about your topic
*e.g. for **owls**, this could be:*
** What do owls eat?*
** Where in the world do owls live?*
** How long do owls live?*
** What types of owls are there?*
** How big do owls grow?*

3. Go to https://machinelearningforkids.co.uk/ in a web browser

4. Click on "**Get started**"

5. Click on "**Try it now**"

6. Click on "**Projects**" on the top menu bar

7. Click the "**+ Add a new project**" button.

FOLLOW ALONG ON THE WORKSHEET

EXTRA CREDIT

Check out Ideas and Extensions

Pick another project @ https://machinelearningforkids.co.uk

Ideas and Extensions

Now that you've finished, why not give one of these ideas a try?

Or come up with one of your own?

Try other chatbots

http://talktothetrex.com is a good example of the sort of thing you've made. Give it a try to get ideas of how to improve your bot.

Add more topics

Can you add more topics to your chatbot, so that there are more types of question that it can answer?

Provide alternate answers

If someone asks the same question more than once, they'll get the exact same answer every time. Can you update your Scratch code so that it varies the answers each time a little? Or starts the answer with "You've asked me this before, but"

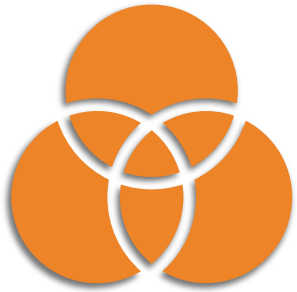
Ask follow-up questions

Can you update your Scratch script so that it replies with a question? It can then recognise the answer to that question, in a similar way to how you made it recognise questions.

Learn about how it works

Click on the "Describe your model" button on the "Learn & Test" page to learn more about how the model you've trained was created.

CONCEPTS



Sentiment Analysis

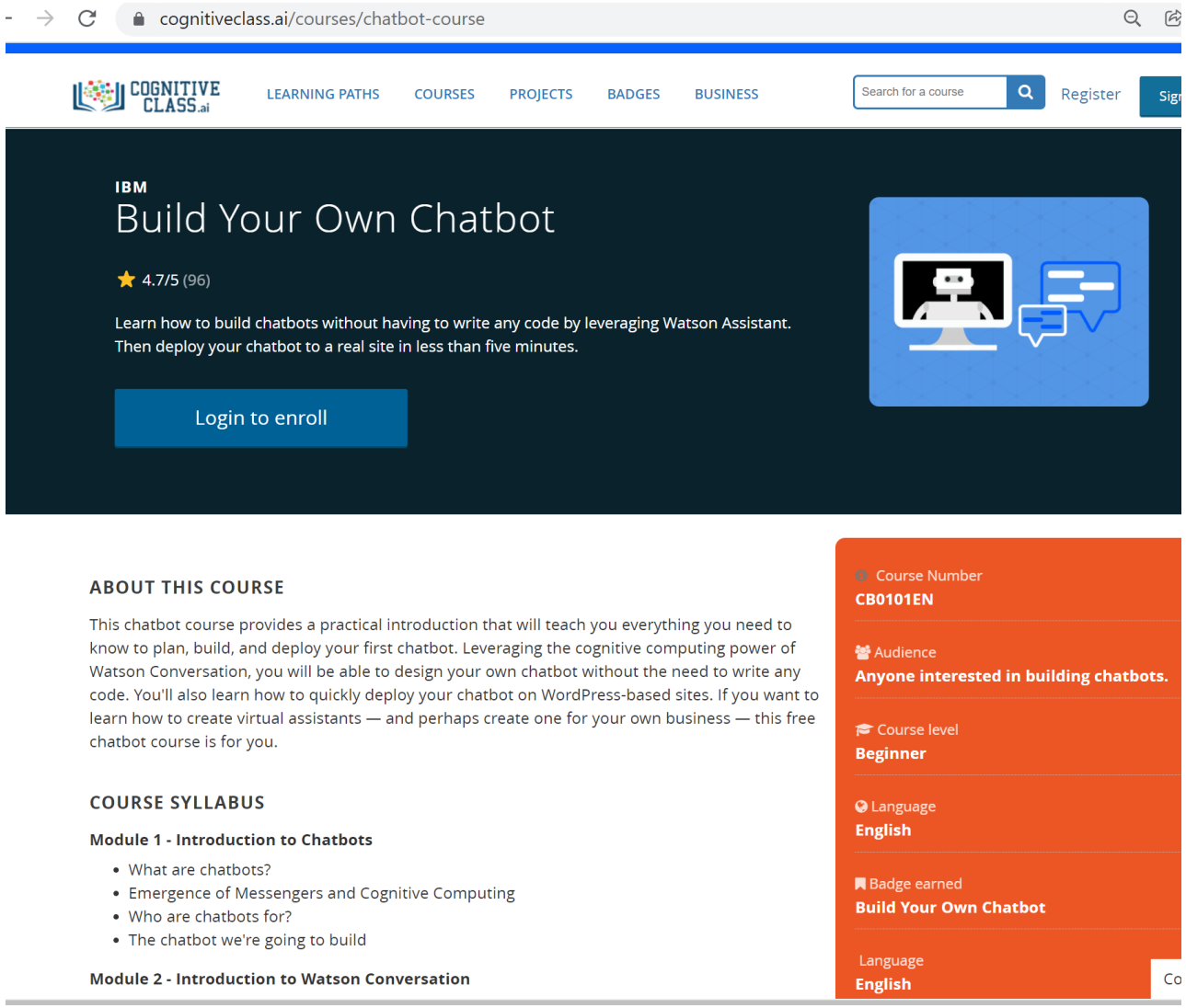
Supervised Learning

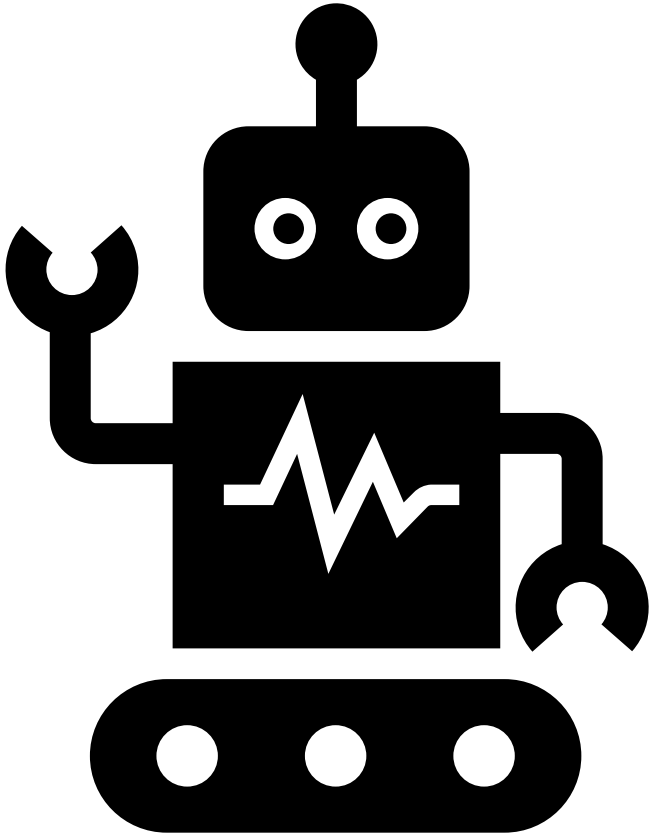
EARN A BADGE

cognitiveclass.ai

Build your own Chatbot course

4 hours





THANK YOU