

Machine Learning For Kids :: Teachers' notes

Worksheet	Quiz Show
Activity	Make a quiz show in Scratch with a computer contestant that can answer questions on the topic of your choice.
Objective	Use a computer that has been trained to find the answers to questions <ul style="list-style-type: none"> Learn how computers can be trained to find answers to questions in documents Learn how "Question Answering" has been a field of machine learning research
Difficulty level	Beginner
Time estimate	40 minutes
Summary	Students create a Scratch script that can look for answers to questions in Wikipedia pages, using a pretrained machine learning model.
Topics	question answering, information retrieval, natural language processing

Setup

Each student will need:

Print-outs	Project worksheet (download from https://machinelearningforkids.co.uk/worksheets) Blocks in Scratch scripts are colour-coded, so printing in colour will make it easier for students.
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Class account will need:

API keys	None
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Customizing

If you use **PRIMM** approaches with your class, add a step where students predict how the project template works. If you want to **increase the amount of coding** involved, delete some of the code from the project template and add steps to the worksheet so students code it themselves.

If you want to **encourage problem solving**, delete some of the detail in the worksheets and provide more general instructions instead.

Project template files & worksheets in MS Word format are available so you can **modify them to suit your class**.

Project templates	https://github.com/IBM/taxinomitis-docs/tree/master/scratch-templates Scratch 3 templates end .sb3
Worksheets	https://github.com/IBM/taxinomitis-docs/tree/master/project-worksheets/msword

Help

Potential issues	<ul style="list-style-type: none"> "https://machinelearningforkids.co.uk" is a long URL to type for some children. You may find it easier to set up a bookmark that they can click on instead. The machine learning model used for this project is large and complex. Some computers may warn that it uses a lot of memory, and slower computers may take a long time (20-30 seconds) to find answers to questions. Factual questions that have short answers should perform better. Encourage your students to experiment with different styles and lengths of questions to they can discover for themselves how the machine learning model performs. Note that the machine learning model in this project has only been trained to work with English text. If the machine learning model cannot find an answer, it will return an empty string. Note that the "say" block in Scratch won't display an empty string. You may want to encourage your students to modify the game show script to customize how it looks or behaves. <p>General troubleshooting and help at https://machinelearningforkids.co.uk/help</p>
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