

Machine Learning For Kids :: Teachers' notes

Worksheet	Smart Classroom
Activity	Create a smart assistant in Scratch that lets you control virtual devices.
Objective	Teach a computer to recognise the meaning of your commands <ul style="list-style-type: none"> How computers can be trained to recognise the intent behind writing. Confidence thresholds indicate when the machine cannot recognise the meaning. How virtual assistants (e.g. Apple Siri, Amazon Alexa, Google Home) work.
Difficulty level	Beginner
Time estimate	1 hour (for full version of the project, where students try making it without machine learning first) or 45 minutes (if students only make a machine learning project)
Summary	Students will train a machine learning model to recognise the meaning of instructions. They will use this in Scratch to make a virtual assistant like Alexa that will respond to commands.
Topics	digital assistants, confidence thresholds, supervised learning

Setup

Each student will need:

Print-outs	Project worksheet (download from https://machinelearningforkids.co.uk/worksheets)
Files	Starter file (download from https://machinelearningforkids.co.uk/worksheets)
Access	Username and password for machinelearningforkids.co.uk

Class account will need:

API keys	Watson Conversation 1 workspace per student One "Lite" API key is free but can only be used to create 5 workspaces One "Standard" API key can be used to create 20 workspaces more detail at: https://github.com/daledane/ml-for-kids/raw/master/doc/machinelearningforkids-apikeys.pdf
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Help

Potential issues	<ul style="list-style-type: none"> No known issues General troubleshooting and help at https://machinelearningforkids.co.uk/help
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