Machine Learning For Kids :: Teachers' notes

Worksheet	Tourist Info
Activity	Create a mobile app in Scratch that recommends tourist attractions based on people's interests.
Objective	**Teach a computer to make recommendations** • The impact of training bias on machine learning systems • Ethical questions introduced by training bias in machine learning systems.
Difficulty level	Intermediate It can involve a lot of typing. Although simple to implement, appreciating the objectives requires an understanding of the implications of machine learning so this is more effective as a follow-on to another project.
Time estimate	1 hour (for full version of the project, where the students make more of the Scratch project) or 45 minutes (if students use the shorter-version of the project with a more pre-made Scratch file)
Summary	Students will train a machine learning model to make recommendations to holiday-makers based on their descriptions of likes and interests. They will use this in Scratch to make a mobile app. They will then be guided to make this more biased, and to consider the impact of bias in AI.
Topics	training bias, recommendations, supervised learning

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. There are **two versions of the worksheet** – depending on the amount of Scratch coding to do.
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 to create 20 workspaces more detail at: https://github.com/dalelane/ml-for-kids/raw/master/doc/machinelearningforkids-apikeys.pdf

Help

Potential issues	• Students will type about 25 short sentences. For some younger children, this might not be achievable in a single lesson, so you may wish to allow extra time. Alternatively, it might be better to do this as a "whole class project" (create the project yourself and tick "whole class project") so that the class only have to write 25 sentences between all of them. • "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. General troubleshooting and help at https://machinelearningforkids.co.uk/help