Machine Learning For Kids :: Teachers' notes

Worksheet	Find It!
Activity	Create a mobile hide-and-seek game in App Inventor that learns to recognise objects
Objective	**Teach a computer to recognise pictures** • How computers can be trained to recognise pictures. • How to use machine learning in a mobile app.
Difficulty level	Advanced
Time estimate	1 hour - 2 hours (depending on the students' experience with App Inventor)
Summary	Students will train a machine learning model to recognise pictures of objects. They use this in App Inventor to make a mobile app that classifies photos.
Topics	image classification, supervised learning, mobile apps

Setup

Each student will need:

Device	An Android mobile phone or tablet
Print-outs	Project worksheet (download from https://machinelearningforkids.co.uk/worksheets) Blocks in App Inventor scripts are colour-coded, so printing in colour will make it easier for students
Access	Username and password for machinelearningforkids.co.uk
Access	Access to App Inventor at http://ai2.appinventor.mit.edu

Class account will need:

API keys	**Watson Visual Recognition** 1 custom model per student One "Lite" API key is free but can only be used to create 2 custom models One "Standard" API key can be used to create to create multiple custom models more detail at: https://github.com/IBM/taxinomitis-docs/raw/master/docs/pdf/machinelearningforkids-apikeys.pdf

Customizing

If you want to **encourage problem solving**, delete some of the detail in the worksheets and provide more general instructions instead.
Project worksheet is available in MS Word format so you can **modify it to suit your class**.

Worksheets	https://github.com/IBM/taxinomitis-docs/tree/master/project-worksheets/msword

Help

Potential issues	• "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. • A video of the finished app in action is available at https://youtu.be/dIjU6rmuoGc General troubleshooting and help at https://machinelearningforkids.co.uk/help