

MACHINE LEARNING WITH DR GERALD FRIEDLAND

TALKING POINTS

1. In a group, list some current applications of machine learning. Which apps do you use every day that might use machine learning?
2. Write down a list of your top three favourite TV series and show it to someone in your class who you don't know very well. Your peer will imitate 'machine learning' by predicting three other shows that you like. Discuss the reasons for those choices. What factors would a computer use to predict your favourites?
4. Again in groups, think of something it would be useful to predict - for example, the number of people who get on a bus at a particular stop. What data would you need to train a computer to make such a prediction?
2. Can you name the two steps involved in machine learning? What can make the second step go wrong?
3. How might machine learning be used in future? For each application you can think of, what are the problems and challenges that need to be overcome?

ACTIVITIES YOU CAN DO AT HOME OR IN THE CLASSROOM

TEACH A COMPUTER TO PLAY A GAME

Visit the Machine Learning for Kids website and decide whether you want to teach a computer to recognise text, images, numbers or sounds. You'll need to register your details to use some of these categories. You'll then create examples and use them to train a computer to recognise things. Finally, you'll create a game in Scratch that uses the computer's new-found ability to recognise them. Good luck and have fun!

<https://machinelearningforkids.co.uk/>

HAVE FUN WITH BEATS

Beat Blender is one of several online AI Experiments on Experiment with Google. You can create a brand new drum beat, which the software produces by using machine to blend four existing drum beats. Play with it to see what kind of drum beats you can come up with. And when you're finished, try some of the other machine-learning games here. They include Freddiemeter - you sing into the computer in time with a Queen song, and the computer tells you how closely your voice matches that of the original Queen singer, Freddie Mercury.

<https://experiments.withgoogle.com/beat-blender>

Have you ever wondered why we have prime numbers?! Watch Gerald's talk to find out: <https://www.youtube.com/watch?v=e4kevnq2vPI>