Minds in Motion

Quick, Draw! with Google

Activity Rundown:

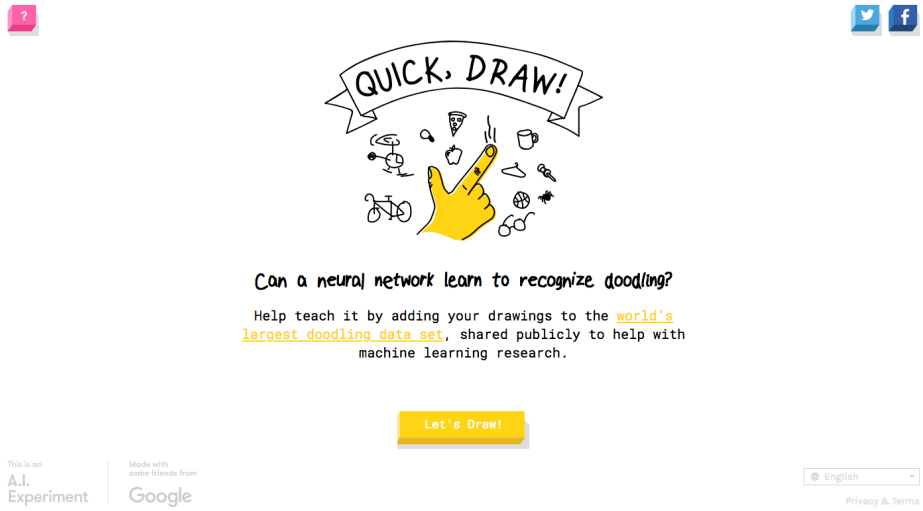
It's time to test your doodling skills! Web designers and machine learning researchers at Google are looking for your help in teaching their Artificial Intelligence (AI) to recognize common shapes and objects. You will be given an object to draw and only 20 seconds to see if the AI can figure out what you're sketching. Are you up to the challenge?

You will need:

- ❑ Computer, tablet, or smartphone
- ❑ Internet connection

Let's do it!

1. Follow this link: https://quickdraw.withgoogle.com/
2. Click "Let's Draw" when you're ready to doodle!



3. Complete the 6 drawing prompts.
4. Compare your drawing to the thousands of others done by people all over the world by following this link: https://quickdraw.withgoogle.com/data

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Background:

The study of AI is an exciting branch of computer science that aims to create intelligent machines that can think and react like humans! There are many examples of AI machines that we tend to use in our day-to-day lives, including:

- Virtual Assistants like Google Home and Alexa
- Self-driving cars
- Email spam filters
- Can you think of any other examples?

You might have noticed that the words “Neural Network” were used quite a bit while navigating the Quick, Draw! website. A neural network is a vital part of AI problem solving as it allows the machine to recognize and classify patterns. Much like how a human brain works, an input will be analysed by the machine and if it’s recognizable, the AI will try to label it! While neural networks are used to identify patterns in drawings, it can also be used to recognize languages, poses, music, and much more!

The way that Quick, Draw! works is very much like our brains work. It will observe the patterns and in which order you draw them in order to take an education guess at what you’re drawing! For example, after seeing thousands of drawings of a cat, the AI machine began to recognize drawings of cats as having pointy ears, small noses, and straight whiskers! How cool is that?!

Fun fact: In 2011, a *Jeopardy!* quiz show exhibition match, Watson, a question-answering computer system, defeated the two greatest *Jeopardy!* Champions by over three times their score and ended up winning $1 million in prize money!
https://en.wikipedia.org/wiki/Question_answering

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Reach out!

We would love to hear from you about all the amazing STEM projects you are doing at home! Show us your finished products on any of the following social media platforms by tagging us or by using the following hashtags. We hope these projects have brought some excitement to your day during these difficult times.

Let us know how we did! Please click below to fill out a short survey on how well we did and what you would like to see more of in the future. Thank you!

https://bit.ly/MindsSurvey2020

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