Final Projects

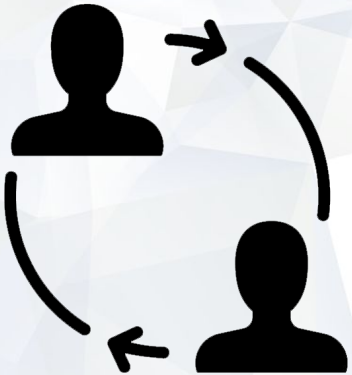
Data Boot Camp

Lesson 23.2

Class Objectives

By the end of today's class you will be able to:

- Import a pretrained CNN model.
- Load an image from a file into a data array.
- Apply preprocessing to the input data.
- Use a pretrained model to make a prediction.



Activity: Explore CNN

In this activity, you will use pretrained models to build a high-level understanding of CNNs and your application.

Suggested Time:

15 Minutes

Activity: Explore CNN

Instructions

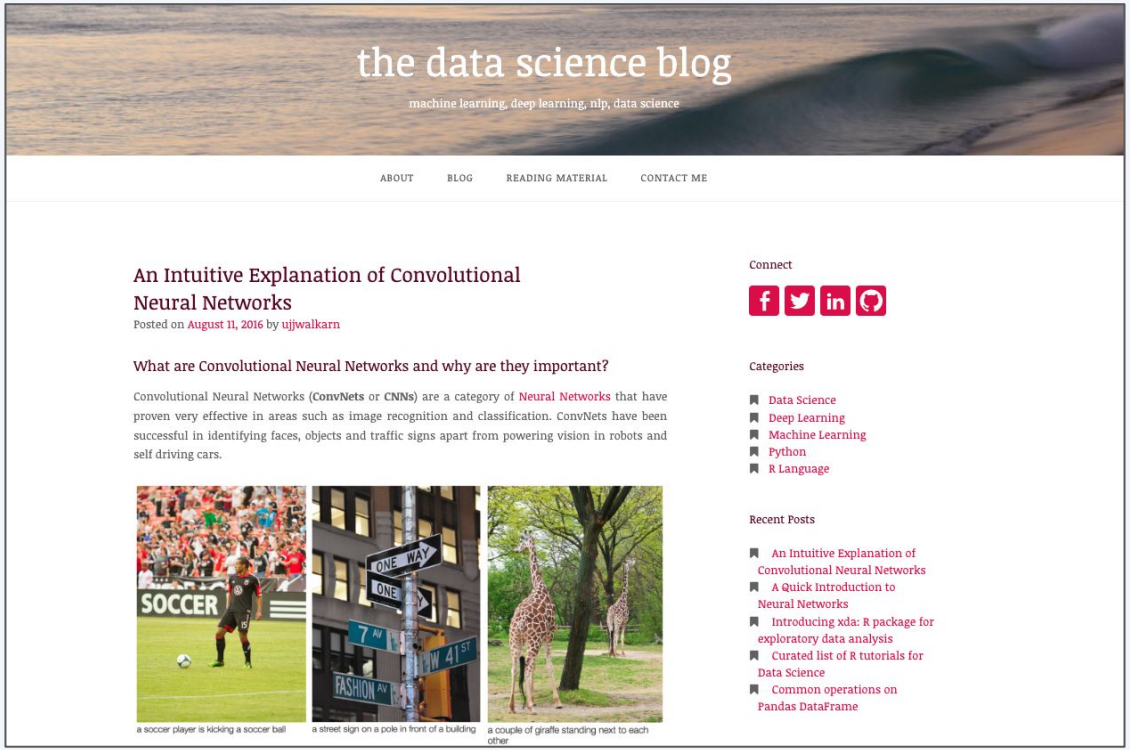
Work with a partner to answer the following questions:

1. What is a convolutional neural network (CNN)?
2. What is a CNN typically used for?
3. What is the difference between a CNN and a deep neural network?

Time's Up! Let's Review.

Activity: Explore CNN

The Data Science Blog has a nice high-level explanation of CNNs.



Questions?

Instructor Demonstration

Pretrained Models

Questions?

Time to Code

Xception

Suggested Time:

20 Minutes

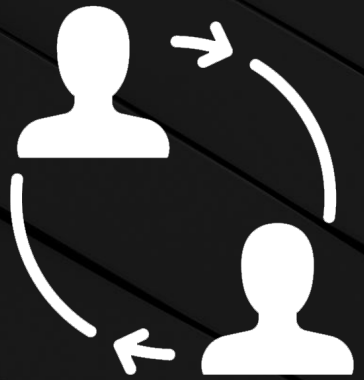
Activity: Xception

Instructions	Use the starter notebook Xception.ipynb for this activity.
	Visit the Xception documentation to determine the image size and any other parameters needed to load and use the model.
	Preprocess the test image by using the model's `preprocess_input` function.
	Use the trained model to predict the output label for the puppy image.
Bonus	Refactor your code into a reusable function that accepts an input image and returns a preprocessed image.
	Test the code by preprocessing the image of a kitten and printing the predicted labels.

Time's Up! Let's Review.

Questions?


Break



Project Work

Suggested Time:

90 Minutes

Project Work: AWS

Remember to closely monitor any AWS resources that you choose to use.

It’s crucial that you clean up and stop, or shut down any AWS resources to avoid accruing additional costs.

Double-check your billing costs.

Time to divide into teams!

Questions?


The End