

# Logistic Regression with a Neural Network mindset

Welcome to your first (required) programming assignment! You will build a logistic regression classifier to recognize cats. This assignment will step you through how to do this with a Neural Network mindset, and so will also hone your intuitions about deep learning.

## Instructions:

- Do not use loops (for/while) in your code, unless the instructions explicitly ask you to do so.

## You will learn to:

- Build the general architecture of a learning algorithm, including:
  - Initializing parameters
  - Calculating the cost function and its gradient
  - Using an optimization algorithm (gradient descent)
- Gather all three functions above into a main model function, in the right order.

## Updates

This notebook has been updated over the past few months. The prior version was named "v5", and the current version is now named '6a'

## If you were working on a previous version:

- You can find your prior work by looking in the file directory for the older files (named by version name).
- To view the file directory, click on the "Coursera" icon in the top left corner of this notebook.
- Please copy your work from the older versions to the new version, in order to submit your work for grading.

## List of Updates

- Forward propagation formula, indexing now starts at 1 instead of 0.
- Optimization function comment now says "print cost every 100 training iterations" instead of "examples".
- Fixed grammar in the comments.
- Y\_prediction\_test variable name is used consistently.
- Plot's axis label now says "iterations (hundred)" instead of "iterations".
- When testing the model, the test image is normalized by dividing by 255.

## 1 - Packages