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| CSCU9M6 Classification  Spring 2023 · Natural Language Processing and Computer Vision |
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| Problem Definition In this assignment, the task to be undertaken is to classify certain objects within images from two different datasets; a set of images from Branson, Missouri, which may be referred to as ‘City A’, and a set of images from Stirling, Scotland, which may be referred to as ‘City B’.  The objects to be classified these images are trees and cars. The goal of this task is to take an image, and determine whether or not it contains a tree or a car; it will also determine whether it contains both, or neither. Whether the image is from Branson or Stirling will not be contained in the classifier. The images come from two different cities simply so that the model does not become overfitted for a specific city. For example, if the images were only from Stirling, to identify a car it might look for the yellow of a license plate (though license plate will be blurred in the data set), or for specific characteristics of the trees native to Stirling.  To accomplish the task of classification, a Deep Learning approach will be used; more specifically, a Convolutional Neural Network will be used to find objects within the image, which will be used to classify it. |