

# Image Recognition with Deep Learning

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## Overview

Deep learning is an emerging field of research and transfer learning is one of its benefits. Transfer Learning makes use of features learned from one domain and used on another and has shown to be pretty very effective in reduced training time and high accuracy. Various models trained on the [ImageNet](#) database are readily available for use with the [Keras](#) Library to generalize images outside the ImageNet database via Transfer Learning.

## Goal

The goal of this Capstone project is to utilize the use of Transfer Learning to perform a variety of image recognitions quickly and efficiently using pre-trained models. In addition, it will also compare the models used in terms of validation accuracy and training time.

## Client

The use of the cell phone is ubiquitous in everyday life. Manufacturers of products who do not need their customers to return defective products during the warranty period to save time and cost of shipping could use image recognition on submitted cell phone photographs of the defective product to determine proof of damage and warranty.

## Data

There are public datasets available on academic institutions, such as [Caltech](#) and [University of Leeds, UK](#), and [Google Open Images](#) which can be used for image recognition studies.

## Data Acquisition

Data will be collected from the publicly available datasets for this Capstone image recognition project.

## Deliverables

Python code, Report, Slide Deck to be posted on Github.