Pinnacol Assurance Data Science Practicum

Overview: Image classification is one of the fields that we are very excited about for our business. You will be working with Google StreetView images of businesses and trying to classify them as either retail or restaurant businesses (1) or not (0). Link to image is below.

1. Data prep - Write a reproducible script in either R or python that preprocesses these images in a manner necessary for both training and testing.
2. Modeling - Create an image classifier that accepts an image as an input and outputs the predicted class and the modeled probability of that class assignment. Your code should be reproducible using libraries publicly available. Please include any configuration steps in your code.
3. Deploy - create a RESTful API that accepts a new image, and returns the predicted class and the modeled probability of that class assignment. This API just needs to run on a local machine and should not actually be deployed to the web. Your code should be reproducible using libraries publicly available. Please include any configuration steps in your code.

Optional Tasks:

1. Image clustering: Create a reproducible model that does clustering of images based on their content
2. Modify your API to accept an address string instead of an image.
3. Create a Shiny app or other web interface for users to interact with your model.

<https://drive.google.com/file/d/0B_PSdvyCyIS5UmlYZERXTlYxNjQ/view?usp=sharing>