Project 2 – What's Cooking?

Picture yourself strolling through your local, open-air market..What do you see? What do you smell? What will you make for dinner tonight?

If you're in Northern California, you'll be walking past the inevitable bushels of leafy greens, spiked with dark purple kale and the bright pinks and yellows of chard. Across the world in South Korea, mounds of bright red kimchi greet you, while the smell of the sea draws your attention to squids squirming nearby. India's market is perhaps the most colorful, awash in the rich hues and aromas of dozens of spices: turmeric, star anise, poppy seeds, and garam masala as far as the eye can see.

Some of our strongest geographic and cultural associations are tied to a region's local foods. This playground competitions asks you to predict the category of a dish's cuisine given a list of its ingredients.

File Description

- train.json - the training set containing recipes id, type of cuisine, and list of ingredients
- test.json - the test set containing recipes id, and list of ingredients
- sample_submission.csv - a sample submission file in the correct format

In the dataset, we include the recipe id, the type of cuisine, and the list of ingredients of each recipe (of variable length). The data is stored in JSON format. An example of a recipe node in train.json:


```
{
 "id": 24717,
 "cuisine": "indian",
 "ingredients": [
    "tumeric",
    "vegetable stock",
    "tomatoes",
    "garam masala",
    "naan",
    "red lentils",
    "red chili peppers",
    "onions",
    "spinach",
    "sweet potatoes"
 ]
 },
```


METHODS:
You should use Neural Networks for this project. Specifically, you should use

- MPLClassifier from scikit
  http://scikit-learn.org/stable/modules/generated/sklearn.neural_network.MLPClassifier.html
- Sequential Deep Learning model from Keras
  https://keras.io/

Objective is to achieve as high accuracy as possible. So you should experiment with the various parameters and network configurations to improve the accuracy of your classification.

WHAT TO SUBMIT

- Report: describe what you did and the results of your approaches. Make sure to include instructions on how to run your code
- All source files
- Put everything in one folder, Project2, zip it, and submit only Project2.zip