IBM Professional Certificate: Capstone Project

**Introduction and Business Problem:**

India is a diverse country with vast variety of transportation systems with heavy reliance on it. One such gigantic network of transportation system is the Indian Railways network. States such as Delhi, Mumbai and Kolkata top the charts in the number of Railway stations and the total KM stretch.

Taking Kolkata for instance, it has more than 350 stations with more than 1300 km of tracks throughout the state. This operates 24 hours a day. With such a heavy reliance, people often find it hard to have a meal while waiting on the train station because of the lack of shops. This is not only the case with common passengers but also with the staff members who work day in and day out.

The objective of this project is to find the nearby food stops (near Kolkata) using Foursquare data to provide the necessary supper to the common passengers and the staff members while escalating the revenues for the local shops.

**Data Required:**

* Kolkata Neighborhood Data:
  + All the neighborhoods of Kolkata state are listed on Wikipedia and this project will perform Web Scrapping using Beautiful Soup to extract the HTML version of it.
  + This data will be cleaned and stored into a pandas Dataframe.
* Geocoding:
  + To get the exact coordinates like the latitude and longitude of each neighborhood on Kolkata state, this project will be using Google / Geocoder Python package.
  + New columns will be appended into the already existing dataframe.
* Venue Data:
  + The nearby venues in the Kolkata state for the locations obtained after web-scrapping will be extracted using Foursquare API call. For this, there is a need to pass in the API code and API secret key.