PROJECT SET UP GUIDE

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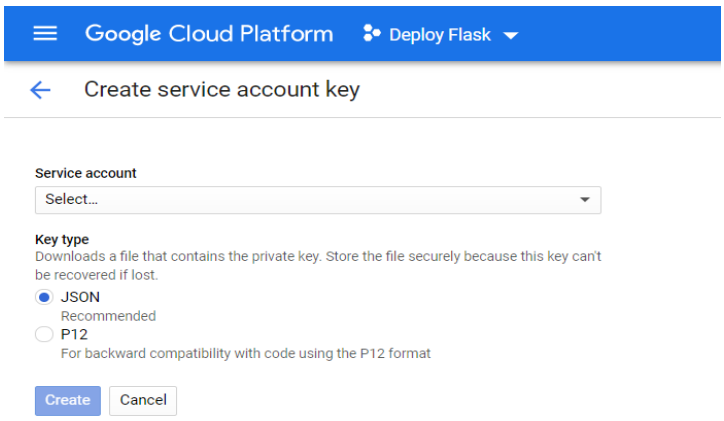
1. GOOGLE CLOUD CREDENTIALS SETUP

The steps for setting up the Google Cloud Credentials are shown below:

1. In the Cloud Console, go to the Create service account key page. Go to the Create Service Account Key page This can be done using the following link: Service Account Page



2. From the Service account list, select New service account.

3. In the Service account name field, enter a name.

4. From the Role list, select Project > Owner. Note: The Role field authorizes your service account to access resources. You can view and change this field later by using the Cloud Console. If you are developing a production app, specify more granular permissions than Project > Owner. For more information, see granting roles to service accounts.

5. Click Create. A JSON file that contains your key downloads to your computer. This key will help to interact with the Big table and Big table using Python Notebooks.

2. Install Dependencies

I have provided the requirement.txt file listing all the dependencies required for my project:

pip3 install -r requirements.txt

The dependencies includes:

Flask==1.1.0	gunicorn==19.6.0
pandas==0.22.0	numpy==1.11.2
scipy==0.18.1	scikit-learn>=0.18
lightgbm==2.3.1	beautifulsoup4==4.8.0
requests==2.22.0	requests-oauthlib==1.3.0
google-cloud-bigquery==1.24.0	

3. Steps to run my code:

1. Copy and paste the Operationalize Flask app folder.
2. Install the requirements.txt using pip install in Python.
3. Change directory where main.py is located
4. python main.py
5. This will run the program on a local server.

Note: You might require the Google service account credentials. Also you need to set up the data on your google cloud using my Python Notebooks:

1. Data Discovery

   Link: https://nbviewer.jupyter.org/github/ssrbazpur/Envisioning-Yellow-Taxi-High-Demand-Areas-in-NYC-city/blob/master/Data_Discovery.ipynb

2. Data Preparation

   Link: https://nbviewer.jupyter.org/github/ssrbazpur/Envisioning-Yellow-Taxi-High-Demand-Areas-in-NYC-city/blob/master/Data_Preparation.ipynb

3. Model Planning

   https://nbviewer.jupyter.org/github/ssrbazpur/Envisioning-Yellow-Taxi-High-Demand-Areas-in-NYC-city/blob/master/Model_Planning.ipynb

4. Model Building

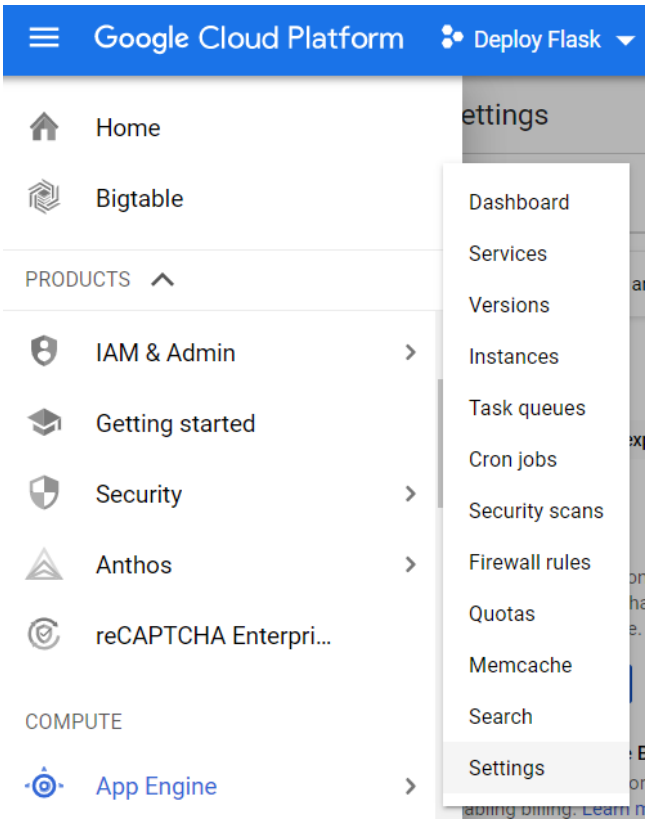
   Link: https://nbviewer.jupyter.org/github/ssrbazpur/Envisioning-Yellow-Taxi-High-Demand-Areas-in-NYC-city/blob/master/Model_Building.ipynb

I could not share my credentials as it is associated with my credit details. So for running my project you need to set up my project and then run the Flask application as indicated above.

(NOTE: YOU HAVE TO RUN EACH AND EVERY PHASE OF MY PROJECT).

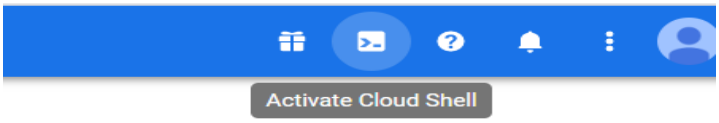
4. Steps to deploy the code:

I used App Engine to deploy my code:



1. Go to Google Cloud Platform and Click on App Engine.
2. Select Setting and then enable application.
3. Now you are ready to deploy your website to the App Engine.

4. On the upper right hand corner there is a cloud shell. There you have to click on activate cloud shell.



5. Now select the Open Editor option as indicated:

6. In the editor option you can drag and drop the Operationalize phase folder in my Github Repository. (Note: The credentials should be obtained by you to run the code I have not given my credentials. Also all phases code must be run before doing this step.)
7. Then change the directory where main.py is located using cd command.
8. Lastly you have to write the following command to deploy your code:

   gcloud app deploy

   And the terminal will ask for the permission just press yes. The app will be deployed and you will get a link like this:

   https://deploy-flask-266818.appspot.com/

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