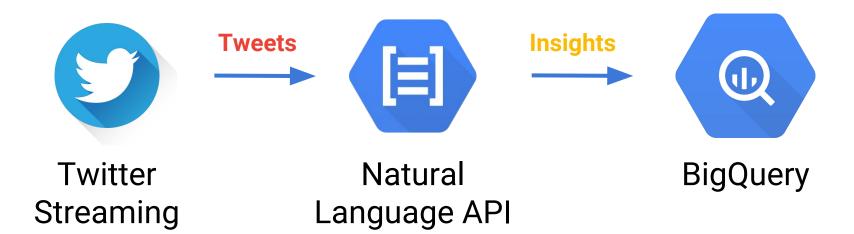


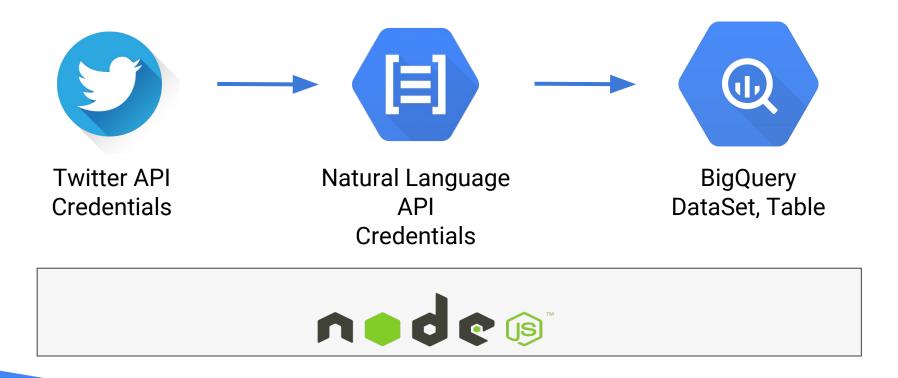
Viral Carpenter Customer Engineer viralc@google.com

Infrastructure. Innovation. Execution.

Let's Build Something



Let's Build Something

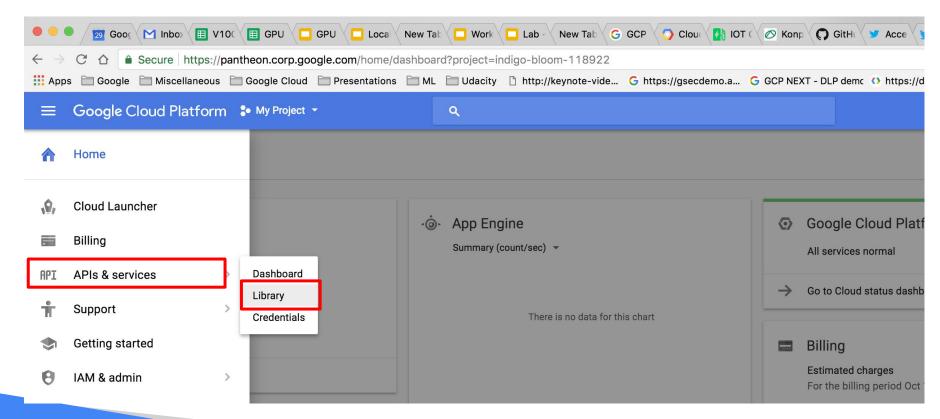


Let's Enable APIs

https://console.cloud.google.com

- Compute Engine API
- BigQuery API
- Natural Language API
- Machine Learning Engine
- Datalab API

Let's Enable APIs



Let's Get Twitter Creds: https://app.twitter.com

- Create an App
- Generate Access Token

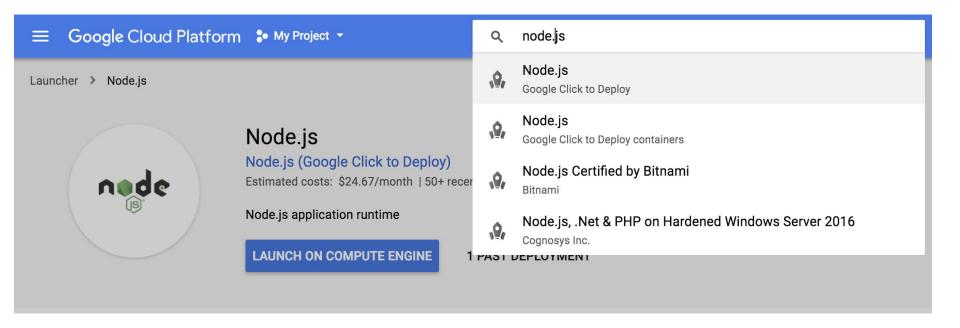
Things to Note:

- App name has to be unique
- Add Phone # to your twitter Profile
- Website needs to be in the format http://www.xyz.com, cannot be www.xyz.com

Let's Set-Up IAM

- Generate Service Account Key IAM & Admin
- Add Service account to IAM
- Generate API Key Natural Language API

Let's Set-Up Node JS VM

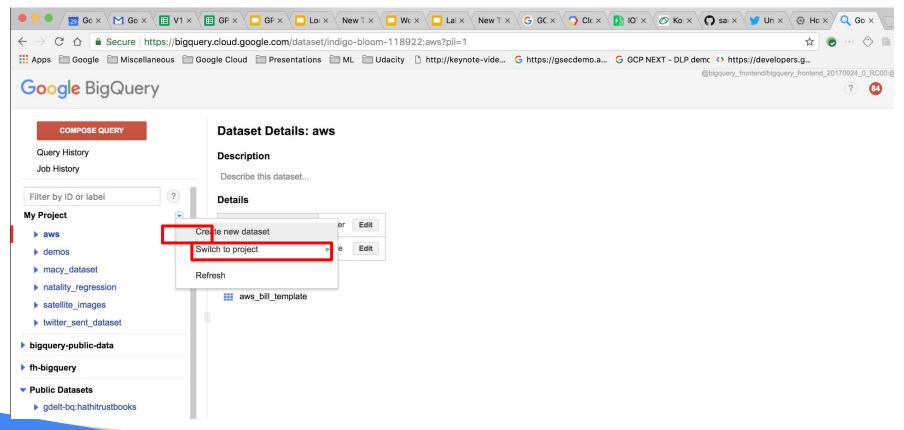


Create BigQuery Dataset & Table

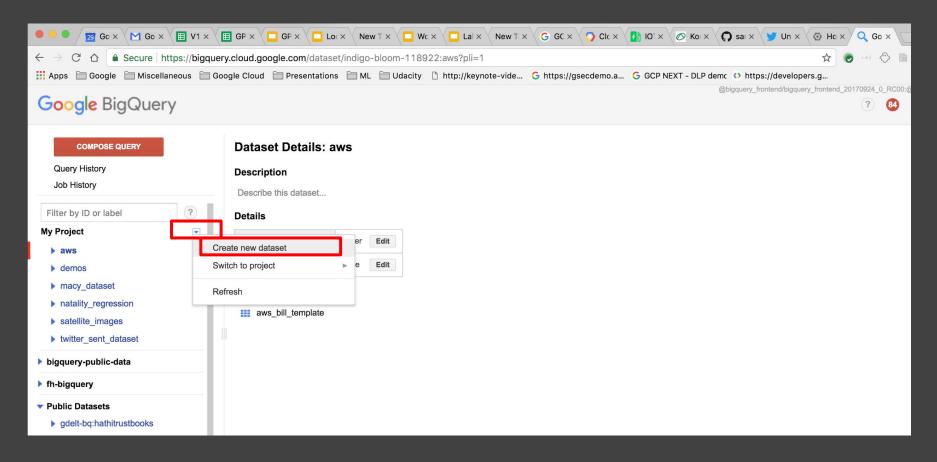
https://github.com/sararob/ml-talk-demos

id:STRING,text:STRING, created_at:STRING, user_followers_count:INTEGER, hashtags:STRING, tokens:STRING, score:STRING, magnitude:STRING, location:STRING

BigQuery Console: bigquery.cloud.google.com



BigQuery Console: bigquery.cloud.google.com



Queries - Sentiment

SELECT FLOAT (score) as sentiment, magnitude, text from [[conject_id>:twitter_sentiment_dataset.tweets]
where text contains "#google"
ORDER BY sentiment ASC, magnitude

Queries - Adjective Count

```
SELECT COUNT(*) as adj_count, adjective
FROM
JS(
(SELECT tokens FROM [roject_id>:twitter_sentiment_dataset.tweets] where text contains "trump"),
tokens.
"[{name:'adjective', type:'string'}]",
"function(row,emit){
      try {
             x = JSON.parse(row.tokens);
             x.forEach(function(token){
                    if (token.partOfSpeech.tag === 'ADJ') {
                          emit({adjective: token.lemma.toLowerCase()});
             });
      } catch (e) {}
GROUP BY adjective
ORDER BY adj_count DESC
LIMIT 100
```