

## Final Demo Of project

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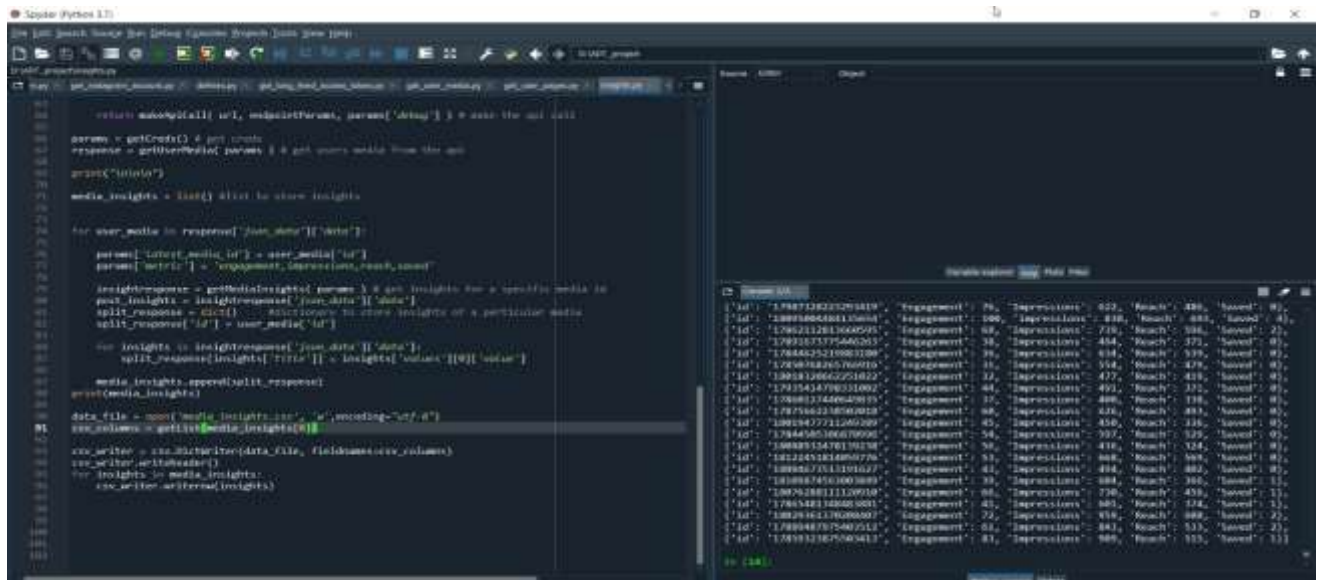
## Instagram Insight Using Business Intelligent

**Step 1:** We have connected to Instagram graph API and collected Instagram data using APIs. We have used the data from an Instagram business account. Note that in milestone II we used data for testing. Next step is to collect our actual instagram data and show insights through MODE visualization tool.

The image displays two screenshots. The left screenshot is the Panoply website homepage, featuring the text 'All Your Business Data in One Place' and a description: 'Sync and store all your business data. Explore your data with SQL or visualize it with your favorite BI or analytics tools.' Below this are buttons for 'Try Panoply Free' and 'Request Demo'. The right screenshot is a Tableau dashboard titled 'Engagement Analysis for Accounts'. It shows a date range from Nov 15, 2017, to Nov 21, 2017, and a company filter set to 'All'. The dashboard includes three donut charts for 'Engaged', 'Neutral', and 'Disengaged' activity types, with corresponding totals: 1,026 for Engaged, 189 for Neutral, and 5.4 for Disengaged. Below these are two bar charts: 'Total Activity' and '% of Activity by Type', both broken down by company. A tooltip on the right side of the Tableau dashboard reads: 'Looking to sync, store, and access all your business data, all in one place?'

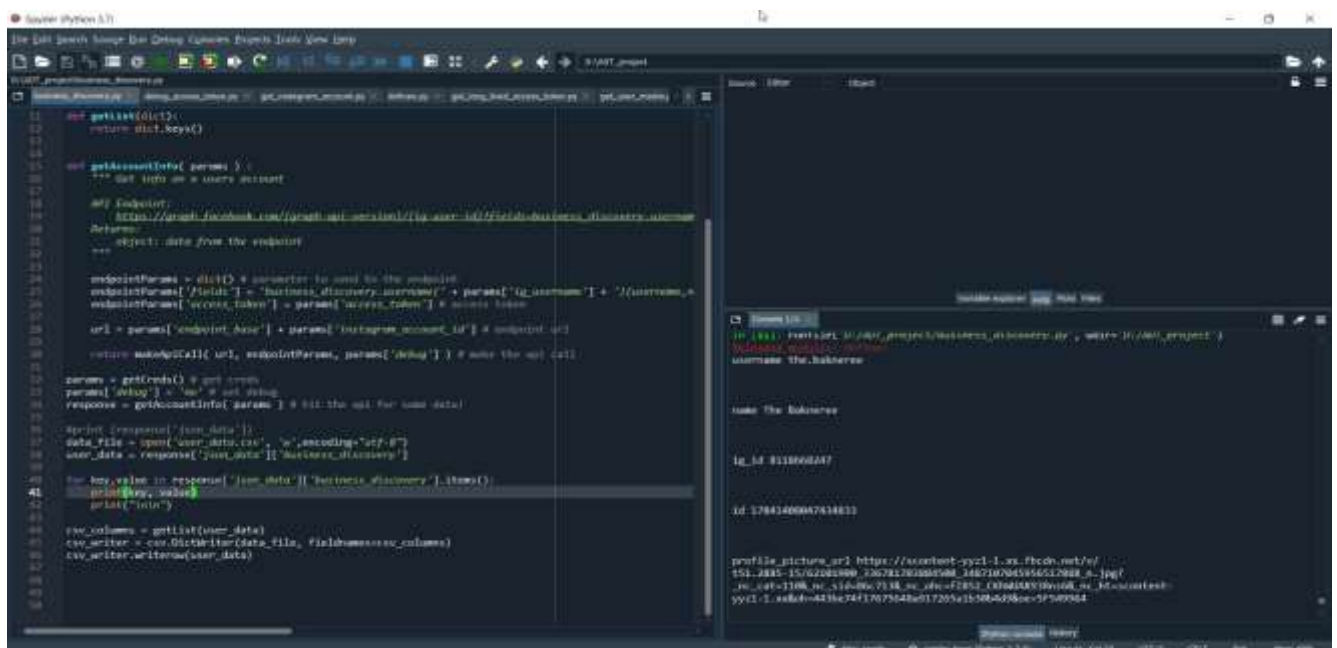
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**Step 2:** After that we make different python files in order to extract data, there are total seven different python files namely business discovery, debug access token, defines, get Instagram account ,get long live access token, get user media and get user token.



```
def get_insights(media_id, endpointParams, params):  
    """Get the insights for a specific media id"""  
    params = getCredentials() & get_credentials()  
    response = get(endpointParams, params) & get_credentials()  
    print(response)  
    media_insights = response['data']  
    for user_media in response['data']:  
        params['media_id'] = user_media['id']  
        params['metric'] = 'engagement,impressions,reach,likes'  
        insights_response = get(endpointParams, params) & get_credentials()  
        post_insights = insights_response['data']  
        split_response = dict() ...  
        split_response['id'] = user_media['id']  
        insights = insights_response['data']  
        split_response['insights'] = insights['data']  
        media_insights.append(split_response)  
        print(media_insights)  
    data_file = open('media_insights.csv', 'w', encoding='utf-8')  
    csv_columns = getlist(media_insights)  
    csv_writer = csv.DictWriter(data_file, fieldnames=csv_columns)  
    csv_writer.writerow()  
    for insights in media_insights:  
        csv_writer.writerow(insights)
```

Inights.py fil



```
def get_business_discovery(params):  
    """Get the business discovery data"""  
    params = getCredentials() & get_credentials()  
    response = get(endpointParams, params) & get_credentials()  
    print(response)  
    business_discovery = response['data']  
    for user_business in response['data']:  
        params['business_discovery'] = user_business['id']  
        business_discovery_response = get(endpointParams, params) & get_credentials()  
        business_discovery_data = business_discovery_response['data']  
        split_response = dict() ...  
        split_response['id'] = user_business['id']  
        business_discovery_data = business_discovery_response['data']  
        split_response['business_discovery'] = business_discovery_data['data']  
        business_discovery_data.append(split_response)  
        print(business_discovery_data)  
    data_file = open('business_discovery.csv', 'w', encoding='utf-8')  
    csv_columns = getlist(business_discovery_data)  
    csv_writer = csv.DictWriter(data_file, fieldnames=csv_columns)  
    csv_writer.writerow()  
    for business_discovery in business_discovery_data:  
        csv_writer.writerow(business_discovery)
```

Business\_discovery.py file

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```

12 def get_user_data(username):
13     """Get user data from the endpoint"""
14     url = f"https://graph.facebook.com/{username}/media/?access_token={access_token}"
15     response = requests.get(url)
16     return response.json()
17
18 def get_user_media(username, first_page):
19     """Get user media from the endpoint"""
20     url = f"https://graph.facebook.com/{username}/media/?access_token={access_token}&first={first_page}"
21     response = requests.get(url)
22     return response.json()
23
24 def save_data_to_csv(data):
25     """Save data to a CSV file"""
26     data_file = open('user_media.csv', 'w', encoding='utf-8')
27     user_data = get_user_data(username)
28     user_data = get_user_data(username)
29     csv_writer = csv.DictWriter(data_file, fieldnames=user_data[0].keys())
30     csv_writer.writeheader()
31     for post in user_data:
32         csv_writer.writerow(post)
33
34 if __name__ == '__main__':
35     username = 'the.bakneree'
36     first_page = 1
37     get_user_media(username, first_page)
38     save_data_to_csv(get_user_media(username, first_page))

```

### Get\_user\_media.py

With this python script we extract instagram user data which consist of engagement, impression, reach, saved. In which engagement defines total numbers of like and count of comment, impression is how many time user visit media, reach defines distinguish user visits, and saved defines total media save entries.

Extracted data are shown below,

|    | A        | B   | C              | D  | E                               | F                        | G            | H |
|----|----------|---|----------------|--|---------------------------------|--------------------------|--------------|---|
|    | id       | caption   | media_type     | media_url                                      | permalink                       | timestamp                | username     |   |
| 1  | 1.81E+16 | Recently made this beautiful cupcakes for my best friend's    | IMAGE          | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2020-07-10T14:33:37+0000 | the.bakneree |   |
| 2  | 1.79E+16 | As a kid, I was always confused. Ice cream flavour decisions  | CAROUSEL_ALBUM | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2020-07-09T12:35:32+0000 | the.bakneree |   |
| 3  | 1.81E+16 | Finally! Was able to bake and post something!                 | IMAGE          | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2020-07-08T12:59:30+0000 | the.bakneree |   |
| 4  | 1.8E+16  | Throwback to this beautiful cake that was designed by my      | IMAGE          | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2020-04-05T13:21:24+0000 | the.bakneree |   |
| 5  | 1.8E+16  | Made this 4kg Chocolate Strawberry Tall Cake with shading     | IMAGE          | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2020-03-18T17:22:37+0000 | the.bakneree |   |
| 6  | 1.81E+16 | A beautiful engagement cake that went out for the lovely      | IMAGE          | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2020-03-14T10:03:40+0000 | the.bakneree |   |
| 7  | 1.79E+16 | Tiramisu means pick me up in the Italian Language. The        | CAROUSEL_ALBUM | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2020-01-25T12:06:19+0000 | the.bakneree |   |
| 8  | 1.79E+16 | One more variety of basket that went out recently!            | IMAGE          | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2020-01-08T05:00:51+0000 | the.bakneree |   |
| 9  | 1.78E+16 | In picture - Dry Fruit Baklava!                               | IMAGE          | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2019-12-31T12:50:26+0000 | the.bakneree |   |
| 10 | 1.79E+16 | In photo - chocolate truffle balls and Elaichi Pista truffles | IMAGE          | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2019-12-31T12:48:00+0000 | the.bakneree |   |
| 11 | 1.8E+16  | Chocolate and Coconut is the best ever combination. It has    | IMAGE          | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2019-12-31T03:31:05+0000 | the.bakneree |   |
| 12 | 1.79E+16 | This dark chocolate cake went out for my friend's birthday    | CAROUSEL_ALBUM | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2019-12-31T03:30:09+0000 | the.bakneree |   |
| 13 | 1.79E+16 | Throwback to the time when I made 350-400 of these little     | IMAGE          | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2019-12-31T03:24:49+0000 | the.bakneree |   |
| 14 | 1.79E+16 | A throwback to all the beautiful baskets that went out this   | CAROUSEL_ALBUM | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2019-12-31T03:12:10+0000 | the.bakneree |   |
| 15 | 1.8E+16  | When a fridge full of these beautiful Strawberry cupcakes     | CAROUSEL_ALBUM | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2019-12-31T03:01:28+0000 | the.bakneree |   |
| 16 | 1.78E+16 | A chocolate Strawberry cake that went out for a girl who      | IMAGE          | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2019-12-31T02:50:54+0000 | the.bakneree |   |
| 17 | 1.81E+16 | The amazing dark chocolate cake that went out for a baby      | CAROUSEL_ALBUM | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2019-12-31T02:44:56+0000 | the.bakneree |   |
| 18 | 1.81E+16 | Christmas Tree Cupcakes that went out recently!               | IMAGE          | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2019-12-25T02:01:18+0000 | the.bakneree |   |
| 19 | 1.81E+16 | A cupcake for the background! Cos its been a while and I love | IMAGE          | https://scontent-yyz1-1.cdninstagram.com/p/... | https://www.instagram.com/p/... | 2019-12-23T10:04:06+0000 | the.bakneree |   |

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|    | A          | B          | C           | D     | E     | F |
|----|------------|------------|-------------|-------|-------|---|
| 1  | id         | Engagement | Impressions | Reach | Saved |   |
| 2  | 1.81E+16   | 90         | 474         | 418   | 0     |   |
| 3  | 1.79E+16   | 76         | 345         | 270   | 0     |   |
| 4  | 1.81E+16   | 98         | 488         | 413   | 1     |   |
| 5  | 1804870000 | 92         | 591         | 483   | 4     |   |
| 6  | 0000000    | 76         | 622         | 486   | 0     |   |
| 7  | 1.81E+16   | 100        | 838         | 693   | 4     |   |
| 8  | 1.79E+16   | 68         | 739         | 596   | 2     |   |
| 9  | 1.79E+16   | 38         | 494         | 371   | 0     |   |
| 10 | 1.78E+16   | 36         | 634         | 539   | 0     |   |
| 11 | 1.79E+16   | 31         | 554         | 479   | 0     |   |
| 12 | 1.80E+16   | 32         | 477         | 419   | 0     |   |
| 13 | 1.79E+16   | 44         | 491         | 371   | 0     |   |
| 14 | 1.79E+16   | 37         | 400         | 338   | 0     |   |
| 15 | 1.79E+16   | 60         | 626         | 493   | 0     |   |
| 16 | 1.80E+16   | 45         | 450         | 336   | 0     |   |
| 17 | 1.78E+16   | 54         | 597         | 529   | 0     |   |
| 18 | 1.81E+16   | 56         | 436         | 324   | 0     |   |
| 19 | 1.81E+16   | 53         | 668         | 569   | 0     |   |
| 20 | 1.81E+16   | 43         | 494         | 402   | 0     |   |
| 21 | 1.81E+16   | 39         | 604         | 366   | 1     |   |
| 22 | 1.81E+16   | 66         | 730         | 456   | 1     |   |
| 23 | 1.79E+16   | 41         | 601         | 374   | 1     |   |
| 24 | 1.80E+16   | 72         | 959         | 608   | 2     |   |

**Step 3:** Then in this step we link this tables to our panoply data warehouse.

| Names               | Table Rows | Schemas | Data Size |
|---------------------|------------|---------|-----------|
| user_data           | 1 rows     | public  | 75MB      |
| user_media          | 16 rows    | public  | 84MB      |
| user_media_insights | 100 rows   | public  | 84MB      |
| Total Sum:          | 117 rows   |         | 243MB     |

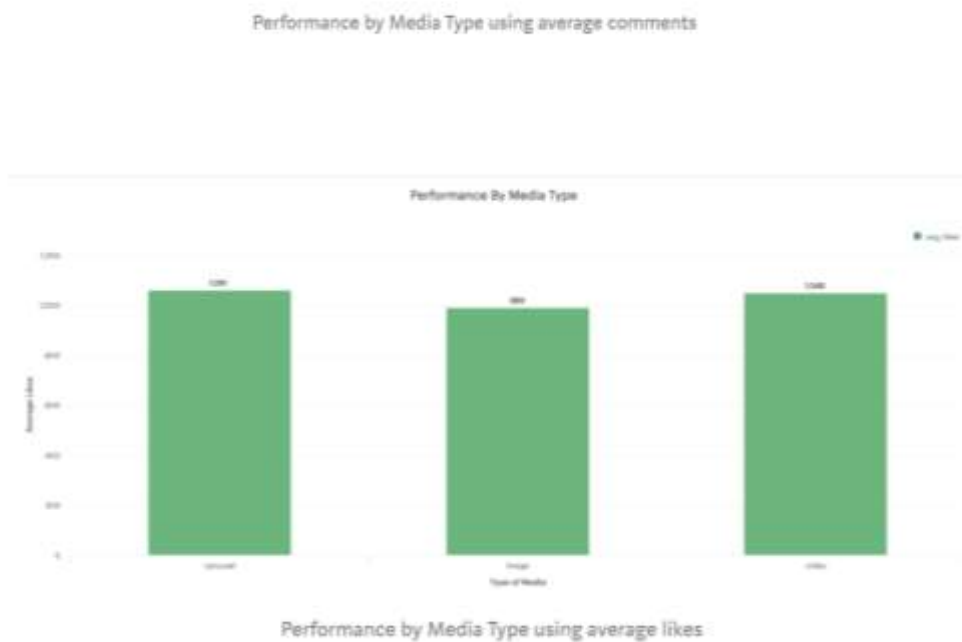
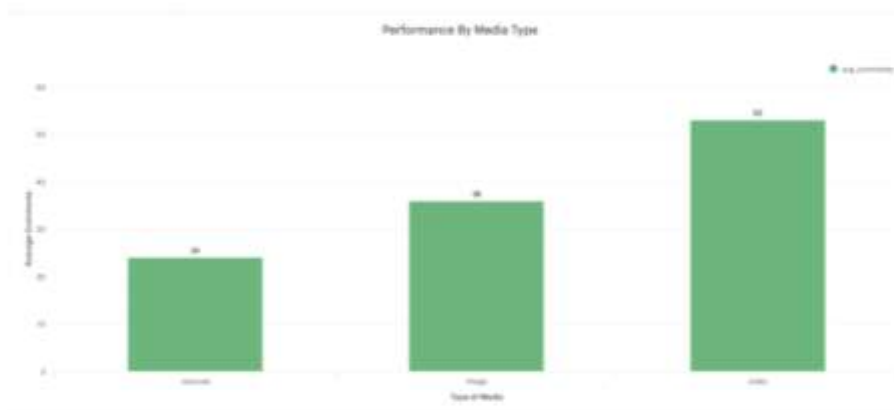


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user\_media\_insights

| # | id          | __updateTime          | engagement | impressions | reach |   |
|---|-------------|-----------------------|------------|-------------|-------|---|
| 1 | 1.78508e+16 | 2020-08-09T22:47:3... | 31         | 554         | 479   | 0 |
| 2 | 1.78621e+16 | 2020-08-09T22:47:3... | 68         | 739         | 596   | 2 |
| 3 | 1.78895e+16 | 2020-08-09T22:47:3... | 61         | 843         | 533   | 2 |
| 4 | 1.80195e+16 | 2020-08-09T22:47:3... | 45         | 450         | 336   | 0 |
| 5 | 1.80847e+16 | 2020-08-09T22:47:3... | 31         | 394         | 402   | 0 |

**Step 4:** Now last step is to connect our panoply to different BI visualization tool, in this step we try to visualized this data through various platform like Mode, teblue, Chartio etc, here I shows photos of mode graphical visualization.



These are the step by step procedure of our project.

Instagram insights using Business intelligence