

Ad Performance Analysis

Team:

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Goal:

Analyze ad campaign performance and provide actionable insights.

Features:

- Use Airbyte or provided data to evaluate ad performance metrics.
- Identify the best-performing campaigns and determine what works (e.g., creative, pages, etc.).
- Highlight the worst-performing campaigns and suggest improvements using LLMs.
- Generate recommendations to improve ROI and engagement.

Technologies:

1. **Frontend:** ReactJS
2. **Backend:** Python

Milestones:

1. Data Collection and Boilerplate Setup
2. Workflow design, Database Schema and API Specification Design
3. UI Engineering
4. Input Page Development
5. API Development and Analysis Generation
6. Dashboard Development

Categories:

We have categorized data into following categories

1. Creatives(description), which key words worked: Creative_body, Creative_call_to_action_type, Creative_title.
2. Financially: AD_Group_Daily_Budget, cost, cost_per_website_add_to_cart, cost_per_website_custom_conversion, cost_per_website_purchase, cost_gbp, cost_usd, cpa, cpc, cpm, offsite_conversion_value_fb_pixel_purchase, offsite_conversion_value_fb_pixel_add_to_cart, offsite_conversion_fb_pixel_add_to_cart, ROAS, ROAS_PERC, T_ROAS_calc_hrly
3. Engagement: clicks, CTR, impressions,
4. Outbound engagement: outbound_clicks, outbound_ctr

Frontend Components:

- Navbar: home, my profile, dashboard link, for me, list
- Landing page(home): Input, dummy graphs
- Dashboard: graphical data
- For me: textual response and suggestions

Approach:

Input -> Segregate the data ad wise -> now we have 75 ads in the list -> for each add -> feature extraction -> Pass the data to llm template -> resp: percentage success per category, type, suggestions

Data Columns for EDA:

1. Ad_id
2. Ad_name
3. Creative_id

4. Creative_body
5. Creative_title
6. Creative_obj_type
7. Cost
8. CTR
9. Purchase_ROAS
10. Clicks
11. Impressions
12. Reach
13. Frequency
14. CPM
15. Cost_per_website_purchase
16. T_ROAS_calc_hrly
17. Outbound_clicks
18. Outbound_ctr

Notebook for ML models:

 EDA and FE of Adalytics.ipynb

API Spec:

1. Upload file:

Method: POST

Endpoint: /analysis/upload-file

Request:

```
{  
  "file": {}  
}
```

Response:

```
{  
  "data": {  
    "file_name": "abc.json",  
  }  
}
```

```
    "message": "File received successfully"
  }
}
```

2. List ads:

Method: GET

Endpoint: /analysis/list-ads

Response:

```
{
  "ads": [
    {
      "AdID": 6645542150201,
      "AdName": "Beard Hack - Step up your grooming routine with the Carbon X.mp4 - PDP"
    },
    {
      "AdID": 6645542151201,
      "AdName": "Beard Hack - Owen Ultimate CarbonX Bundle Video - PDP - Copy"
    },
    {
      "AdID": 6645758587401,
      "AdName": "Beard Hack - Owen Ultimate CarbonX Bundle Video - PDP - Video"
    },
  ]
}
```

3. View dashboard:

Method: GET

Endpoint: analysis/dashboard

Response:

```
{
  "data": {
    "pieChart": {
      "data": [
        {
          "value": "SHARE",

```

```

        "count": 18534
      },
      {
        "value": "VIDEO",
        "count": 6927
      }
    ]
  },
  "barChart": {
    "data": [
      {
        "creative_object_type": "SHARE",
        "average_cost": 2.441678801122262
      },
      {
        "creative_object_type": "VIDEO",
        "average_cost": 1.8234000433087918
      }
    ]
  },
  "lineChart": {
    "data": [
      {
        "Cost": 0.0,
        "Clicks": 0
      },
      {
        "Cost": 0.0,
        "Clicks": 0
      }
    ]
  },
  "scatter plot": {
    "data": [
      {
        "x": 0,
        "y": 0,
        "z": 0.0
      },
      {
        "x": 0,
        "y": 0,

```

```

        "z": 0.0
      },
    },
    "topOutboundClicks": {
      "data": [
        {
          "AdID": 6656103598201,
          "OutboundClicks": 3917
        },
        {
          "AdID": 6645927012401,
          "OutboundClicks": 3454
        }
      ]
    }
  }
}

```

4. Generate descriptive analysis:

Method: GET

Endpoint: /analysis/ad/{id}

Response:

```

{
  "analysis": {
    "ad_id": 6645542150201,
    "ad_name": "Beard Hack - Step up your grooming routine with the Carbon X.mp4 - PDP",
    "result": "stop",
    "reasons": [
      "Low CTR (0.01266605504587156) and ClickThroughRate (0.01266823827752828)",
      "High CostPerClick (1.325138054198605) and CostPerThousandImpressions (16.45647339449541)",
      "Only 3 clicks with a high cost of $4.483948623853211"
    ],
    "insights": [
      "The ad is not resonating well with the target audience",
      "The creative body may need to be revised to better capture attention and drive engagement"
    ]
  }
}

```

```
    ],  
    "suggestions": [  
        "Consider revising the creative body to make it more  
compelling and attention-grabbing",  
        "Adjust targeting options to reach a more relevant  
audience",  
        "Reduce budget or pause ad to reassess performance and  
optimize for better ROI"  
    ]  
}  
}
```

Next steps:

- 1.

Related links:

1. Data dictionary:
<https://docs.google.com/spreadsheets/d/1Gp5HnphxuAhIAXq3KG7khVW4aQikIEZ5/edit?gid=1752268075#gid=1752268075>
2. Search the column name here and this will give u the meaning:
<https://supermetrics.com/docs/integration-facebook-ads-fields/>