Data Visualization Generator

API Manual

Doofenshmirtz Evil Inc

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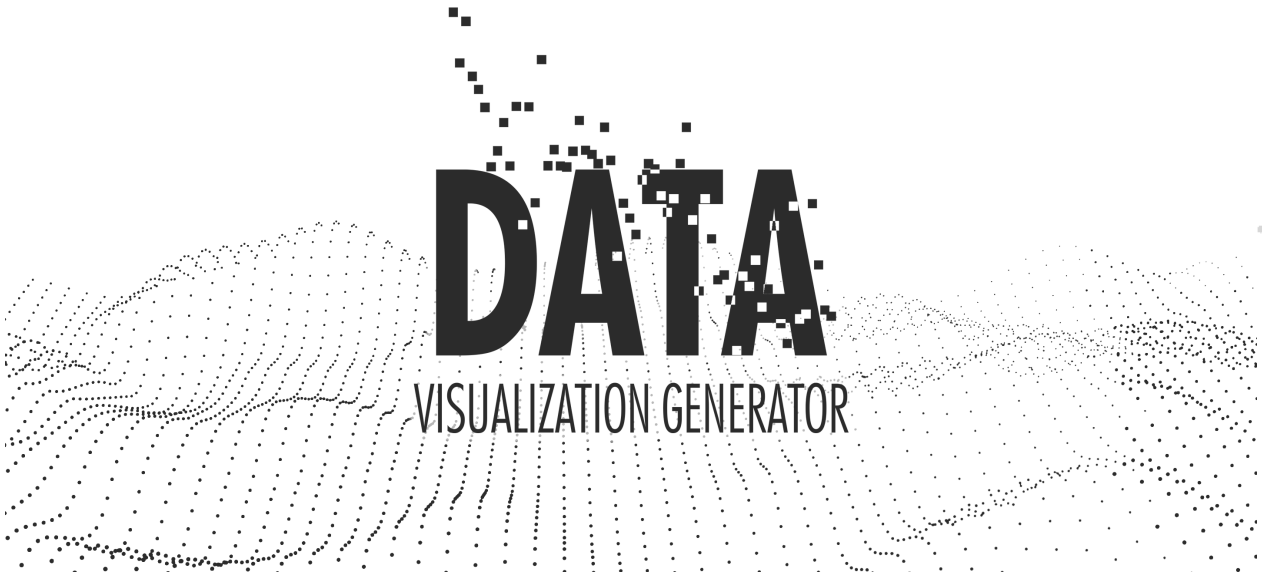

Contents

1 Introduction

All components in the Data Visualization system will interact with each other strictly through the Visualization API. The following document describes the structure of the API, as well as how requests and responses need to be structured. In order to make requests, you will be required to follow RESTful conventions.

2 Domains

- **Remote-prod-host:** https://data-visualisation-prod.herokuapp.com
- **Remote-dev-host:** https://data-visualisation-dev.herokuapp.com
- **Localhost:** http://localhost:8000

3 Status Codes

Status Code	Message
200	OK
400	Bad Request
401	Unauthorized

4 User Endpoints

4.1 Login

This endpoint is used to log an existing user in to the system.
Request Method: POST
Request URL: {Domain}/users/login
Request Body: The request body requires the following fields

```
{
    "email": "duncan@gmail.com",
    "password" : "Elna1234@"
}
```

Response Body: This endpoint will return the API key of the user, which must be used for all further requests

```
{
    "message": "Successfully Logged In User",
    "email": "duncan@gmail.com",
    "firstname": "Ducan",
    "lastname": "Vodden",
    "apikey": "2ZLp3VvuKB7nSlO6JLH9"
}
```

4.2 Register

This endpoint is used to create an account for a user.
Request Method: POST
Request URL: {Domain}/users/register

Request Body: The request body requires the following fields

```
{
     "name" : "Ducan",
     "surname" : "Vodden",
     "email" : "duncan@gmail.com",
     "password" : "Elna1234@",
     "confirmPassword" : "Elna1234@"
}
```

Comment: Password can not be the same as the user name, it must also contain at least one number (0-9), at least one lowercase letter (a-z), at least one capital letter (A-Z), and at least one special character(!,@,,$,%,&,)*

Response Body: This endpoint will return the API key of the user, which must be used for some further requests.

```
{
    "message": "Successfully Registered User",
    "email": "duncan@gmail.com",
    "firstname": "Ducan",
    "lastname": "Vodden",
    "apikey": "2ZLp3VvuKB7nSlO6JLH9"
}
```

4.3 Logout

This endpoint is used to log out a user from their account.
Request Method: POST
Request URL: {Domain}/users/logout
Request Body: The request body requires the following fields

```
{
    "apikey": "8WEL2IGCBSswuFW5625y"
}
```

Response Body:

```
{
   "message": "Successfully Logged out"
}
```

4.4 Deregister

This endpoint is used to deregister a user, if they do not want to have their account anyore.
Request Method: POST
Request URL: {Domain}/users/deregister
Request Body: The request body requires the following fields

```
{
     "email": "duncan@gmail.com",
     "password" : "Elna1234@"
}
```

Response Body:

```
{
    "message": "Successfully Deregistered User"
}
```

5 Dashboard Endpoints

5.1 Get list of dashboards

This endpoint is used to get a list of dashboards.
Request Method: POST
Request URL: {Domain}/dashboards/list
Request Body: The request body requires the following fields

```
{
    "apikey": "8WEL2IGCBSswuFW5625y"
}
```

Response Body: *Note that if the user has not created a dashboard the response body will be empty*

```
[
    {
        "id": 199,
        "name": "Cats",
        "description": "Cats are small domesticated carnivorous ...",
        "email": "duncan@gmail.com"
    }
]
```

5.2 Add a new dashboard

This endpoint is used to add a new dashboard.
Request Method: POST
Request URL: {Domain}/dashboards/add
Request Body: The request body requires the following fields

```
{
     "apikey": "2ZLp3VvuKB7nSlO6JLH9",
     "name" : "Cats",
     "description" : "Cats are small domesticated carnivorous ..."
}
```

Response Body:

```
{
    "message": "Successfully Added Dashboard",
    "id": 200,
    "name": "Cats",
    "description": "Cats are small domesticated carnivorous mammal ...",
    "email": "duncan@gmail.com"
}
```

5.3 Remove dashboard

This endpoint is used to remove a dashboard.
Request Method: POST
Request URL: {Domain}/dashboards/remove
Request Body: The request body requires the following fields

```
{
    "apikey": "8WEL2IGCBSswuFW5625y",
    "dashboardID": "76"
}
```

Response Body:

```
{
   "message": "Successfully Removed Dashboard"
}
```

5.4 Update dashboard

This endpoint is used to update a dashboard.
Request Method: POST
Request URL: {Domain}/dashboards/update
Request Body: The request body requires the following fields

```
{
    "apikey": "2ZLp3VvuKB7nSlO6JLH9",
    "dashboardID" : 200,
    "fields": ["name", "description"],
    "data": ["Dogs", "Furry, Cute and the best furry friends in the world!"]
}
```

Comment: The order of the data needs to correspond to the order of the fields.
Response Body:

```
{
     "message": "Successfully Updated Dashboard"
}
```

6 Data Source Endpoints

6.1 Get data source list

This endpoint is used to get a data source list.
Request Method: POST
Request URL: {Domain}/datasource/src/list
Request Body: The request body requires the following fields

```
{
    "apikey": "8WEL2IGCBSswuFW5625y"
}
```

Response Body: *Note that if the user has not added a data source then the body will be empty*

```
[
    {
        "id": 119,
        "email": "duncan@gmail.com",
        "sourceurl": "https://services.odata.org/V2/Northwind/Northwind.svc"
    }
]
```

6.2 Add data source

This endpoint is used to add a data source.
Request Method: POST
Request URL: {Domain}/datasource/src/add

Request Body: The request body requires the following fields

```
{
    "apikey": "AQPqvSZJyO5j3K6mUC9b",
    "dataSourceUrl" : "https://services.odata.org/V2/Northwind/Northwind.svc"
}
```

Response Body:

```
{
    "message": "Successfully Added Data Source",
    "id": 119,
    "email": "duncan@gmail.com",
    "sourceurl": "https://services.odata.org/V2/Northwind/Northwind.svc"
}
```

6.3 Remove data source

This endpoint is used to remove a data source.
Request Method: POST
Request URL: {Domain}/datasource/src/remove
Request Body: The request body requires the following fields

```
{
    "dataSourceID" : 119,
    "apikey": "2ZLp3VvuKB7nSlO6JLH9"
}
```

Response Body:

```
{
    "message": "Successfully Removed Data Source"
}
```

6.4 Retrieve Metadata

This endpoint is used to retrieve metadata of a source url..
Request Method: POST
Request URL: {Domain}/datasource/meta/metadata
Request Body: The request body requires the following fields

```
{
    "sourceurl": "https://services.odata.org/V2/Northwind/Northwind.svc"
}
```

Response Body:

```
 {
        "items": {
        "Category": [
            "CategoryID",
            "CategoryName",
            "Description",
            "Picture"
        ],
        "types": {
            "Category": [
                "Edm.Int32",
                "Edm.String",
                "Edm.String",
```

```
                "Edm.Binary"
            ]
        }
    }
}
```

6.5 Retrieve Entity List

This endpoint is used to retrieve a entity list and their corresponding fields for a specific data source.
Request Method: POST
Request URL: {Domain}/datasource/meta/entities
Request Body: The request body requires the following fields

```
{
   "sourceurl": "https://services.odata.org/V2/Northwind/Northwind.svc"
}
```

Response Body:

```
 {
    "source": "https://services.odata.org/V2/Northwind/Northwind.svc",
    "entityList": {
        "Category": [
            "CategoryID",
            "CategoryName",
            "Description",
            "Picture"
        ],
        "CustomerDemographic": [
            "CustomerTypeID",
            "CustomerDesc"
        ]
}
}
```

7 Graph Endpoints

7.1 Get list of graphs

This endpoint is used to get a list of graphs.
Request Method: POST
Request URL: {Domain}/graphs/list
Request Body: The request body requires the following fields

```
{
    "dashboardID" : "74",
    "apikey": "8WEL2IGCBSswuFW5625y"
}
```

Response Body: *Note that if the user has not created a dashboard the response body will be empty*

```
[
    {
        "id": 55,
        "dashboardid": 199,
        "title": "TEST GRAPH2",
        "metadata": {/*JSON*/},
        "options": {/*JSON*/}
    }
```

```
]
```

7.2 Add new graph

This endpoint is used to add a new graph.
Request Method: POST
Request URL: {Domain}/graphs/add
Request Body: The request body requires the following fields

```
{
     "apikey": "2ZLp3VvuKB7nSlO6JLH9",
     "dashboardID" : 199,
     "title": "TEST GRAPH2",
     "metadata":"test",
     "options":"test"
}
```

Response Body:

```
{
    "message": "Successfully Added To Dashboard",
    "id": 54,
    "dashboardid": 199,
    "title": "TEST GRAPH2",
    "metadata": "test",
    "options": "test"
}
```

7.3 Remove graph

This endpoint is used to remove a graph.
Request Method: POST
Request URL: {Domain}/graphs/remove
Request Body: The request body requires the following fields

```
{
     "apikey": "2ZLp3VvuKB7nSlO6JLH9",
     "dashboardID": 199,
     "graphID" : 54
}
```

Response Body:

```
{
   "message": "Successfully Removed Graph"
}
```

7.4 Update graph

This endpoint is used to update a graph.
Request Method: POST
Request URL: {Domain}/graphs/update
Request Body: The request body requires the following fields

```
{
    "apikey": "2ZLp3VvuKB7nSlO6JLH9",
    "graphID": 55,
    "dashboardID": 199,
```

```
    "fields": ["title", "metadata" , "options" ],
    "data": ["My Title", {/*JSON*/}, {/*JSON*/}]
}
```

Comment: The order of data needs to correspond to the order of fields. **Response Body:**

```
{
   "message": "Successfully Updated Graph"
}
```

7.5 Update graph

This endpoint is used to set the graph types.
Request Method: POST
Request URL: {Domain}/graphs/types
Request Body: The request body requires the following fields

```
{
    "apikey": "2ZLp3VvuKB7nSlO6JLH9",
    "graphTypes": ["type", "type"]
}
```

Response Body:

```
{
   "message": "Successfully Updated Graph Types"
}
```

8 Graph Suggestion Endpoints

8.1 Get suggestions

This endpoint is used to get graph suggestions.
Request Method: POST
Request URL: {Domain}/suggestions/graphs
Request Body: The request body requires the following fields

```
{
    "sourceurl": "https://services.odata.org/V2/Northwind/Northwind.svc"
}
```

Response Body: */*JSON options object, title included*/*

```
{
    "title": {
        "text": "Products_by_Category"
    },
    "dataset": {
        "source": [
            [
                "CategoryName",
                "value"
            ],
            [
                "Beverages",
                "10 boxes x 20 bags"
            ],
            [
                "Beverages",
```

```
                "24 - 12 oz bottles"
            ]
        ]
    },
    "xAxis": {
        "type": "category"
    },
    "yAxis": {},
    "series": [
        {
            "type": "line",
            "encode": {
                "x": "CategoryName",
                "y": "value"
            }
        }
    ]
}
```

9 Exports

9.1 Export to JSON

This endpoint is used to download a JSON file that contains a charts data.
Request Method: POST
Request URL: {Domain}/export/json
Request Body: The request body requires the following fields

```
{
   {
        "fileName" : "test.json",
        "config" : [
             {
                "location" : "123 Road Dr",
                "city_state" : "MyCity ST",
                "phone" : "555-555-5555",
                "distance" : "1"
             },
             {
                "location" : "456 Avenue Crt",
                "city_state" : "MyTown AL",
                "phone" : "555-867-5309",
                "distance" : "0"
             }
          ]
    }
}
```

Response Body: A request to download file will popup and would contain a file in json format.

```
[
    {
        "location": "123 Road Dr",
        "city_state": "MyCity ST",
        "phone": "555-555-5555",
        "distance": "1"
    },
    {
        "location": "456 Avenue Crt",
        "city_state": "MyTown AL",
        "phone": "555-867-5309",
```

```
        "distance": "0"
    }
]
```

9.2 Export to CSV

This endpoint is used to download a CSV file that contains a charts data.
Request Method: POST
Request URL: {Domain}/export/csv
Request Body: The request body requires the following fields

```
{
    "config" : [
          {
             "location" : "123 Road Dr",
             "city_state" : "MyCity ST",
             "phone" : "555-555-5555",
             "distance" : "1"
          },
          {
             "location" : "456 Avenue Crt",
             "city_state" : "MyTown AL",
             "phone" : "555-867-5309",
             "distance" : "0"
          }
        wh]
}
```

Response Body: A request to download file will popup and would contain a file in csv format.

```
location,city_state,phone,distance
123 Road Dr,MyCity ST,555-555-5555,1
456 Avenue Crt,MyTown AL,555-867-5309,0
```