

Bogazici University IE360 Project Submission API Manual for Students

These slides will give an overview of the API that is provided for the project.
5-mins read!

Thanks to Trendyol Group for providing the data for the project!

Trendyol Group

trendyol
com

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tech

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express

dolap

API Web Interface : <http://167.172.183.67/>

A first note:

You actually do not need to use the web interface.

Interacting through R/Python with the use of requests will be enough. We will provide sample scripts for you.

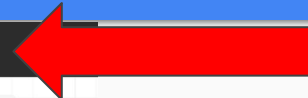
The screenshot shows the Django REST framework API interface. At the top, there's a dark header with "Django REST framework" on the left and "Log in" on the right. Below the header, the main content area has a light gray background. It starts with a breadcrumb "360 Project Api". The title "360 Project Api" is prominently displayed, followed by the description "IE360 Project API implemented by the teaching staff." To the right of the title are two buttons: "OPTIONS" and "GET" with a dropdown arrow. Below the title, there's a section for the "GET /" endpoint. It shows the HTTP status "200 OK" and the allowed methods "GET, HEAD, OPTIONS". The "Content-Type" is "application/json" and the "Vary" is "Accept". The response body is a JSON object containing a list of API endpoints:

```
{
  "submission": "http://167.172.183.67/submission/",
  "active-subcompetition": "http://167.172.183.67/active-subcompetition/",
  "leaderboard": "http://167.172.183.67/leaderboard/",
  "token": "http://167.172.183.67/token/",
  "students": "http://167.172.183.67/students/",
  "products": "http://167.172.183.67/products/",
  "dataset": "http://167.172.183.67/dataset/",
  "ranking": "http://167.172.183.67/ranking/"
}
```

API Web Interface : <http://167.172.183.67/>

Django REST framework

Log in



360 Project Api

360 Project Api

IE360 Project API implemented by the teaching staff.

OPTIONS

GET

GET /

HTTP 200 OK
Allow: GET, HEAD, OPTIONS
Content-Type: application/json
Vary: Accept

```
{
  "submission": "http://167.172.183.67/submission/",
  "active-subcompetition": "http://167.172.183.67/active-subcompetition/",
  "leaderboard": "http://167.172.183.67/leaderboard/",
  "token": "http://167.172.183.67/token/",
  "students": "http://167.172.183.67/students/",
  "products": "http://167.172.183.67/products/",
  "dataset": "http://167.172.183.67/dataset/",
  "ranking": "http://167.172.183.67/ranking/"
}
```

To use the web interface, you need to log in by navigating to the sign in page through this button.

You will use the group usernames and passwords that were sent to your e-mail addresses

/dataset

TLDR: What you need to use for your models

This endpoint has the data you need.

Each object returned from this endpoint will have the sales information and related features for each day.

Django REST framework

admin ▾

[360 Project Api](#) / Dataset List

Dataset List

Filters

OPTIONS

GET ▾

GET /dataset/

```
HTTP 200 OK
Allow: GET, HEAD, OPTIONS
Content-Type: application/json
Vary: Accept

[
  {
    "price": 236.07,
    "event_date": "2020-05-04",
    "product_content_id": "7061886",
    "sold_count": 124,
    "visit_count": 7423,
    "favored_count": 274,
    "basket_count": 496,
    "category_sold": 133,
    "category_brand_sold": 18,
    "category_visits": 342333,
    "ty_visits": 141954662
  },
  {
    "price": 103.58,
    "event_date": "2020-05-04",
    "product_content_id": "32939029",
    "sold_count": 199,
    "visit_count": 6201,
    "favored_count": 381,
    "basket_count": 652,
    "category_sold": 130,
    "category_brand_sold": 18,
    "category_visits": 342333,
    "ty_visits": 141954662
  }
]
```

167.172.183.67

/dataset

Definitions of the features are below:

Price : Average price of the items sold for the given day.

Event Date: Date of the event.

Sold Count: Number of items sold in the given day.

Visit Count: Number of visits to the particular product.

Favored Count: Number of times the product is added to favorites.

Basket Count: Number of times the product is added to basket (not necessarily purchased).

Category Sold: Number of items sold from the same category.

Category Brand Sold: Number of items sold from the same category brand.

Category Visits: Visits to the category of the item in the given day.

TY Visits: Total Trendyol visits in the given day.

/dataset

Suggestion:

In the sample scripts, we gave you a sample function for obtaining the data. You will see that this endpoint accepts ``start_date`` and ``end_date`` parameters.

It might be a good idea for you to download the whole dataset once, and then each day you can provide the `start_date` parameter to download only the data for that day. Rest will be simply updating by merging the new data and your saved version of the bulk data.

/submission

TLDR: Your predictions!

This is the endpoint for you to submit your predictions.

Required Format = A dictionary/map of predictions, where keys are the Product Content ID's and values are your predictions for the sales of the given day.

Ex:

```
{"6676673": 269.0, "32939029": 119.0, "31515569": 600.0, "85004": 40.0, "3904356": 0.0, "7061886": 22.0, "4066298": 197.0, "5926527": 0.0}
```

If you are not familiar with any of the terms mentioned above, do not worry, please check and try to understand the regarding sections of the sample scripts!

Sub Competition : For this project, the whole week is the main competition, and each day is the “Sub Competition”.

admin ▼

Sub Competition List

OPTIONS

GET

GET /active-subcompetition/

```
HTTP 200 OK
Allow: GET, HEAD, OPTIONS
Content-Type: application/json
Vary: Accept
```

```

1 {
2   {
3     "id": 2,
4     "name": "IE360-Project-Trial/Day-4-May",
5     "deadline": "2020-05-05T22:08:27Z",
6     "main_competition": "IE360-Project-Trial",
7     "start_date": "2020-05-04T22:08:27Z",
8     "ground_truth": "{\"6676673\": 150.0, \"32939029\": 12.0, \"31515569\": 494.0, \"85004\": 40.0, \"3904356\": 0.0, \"7061886\": 22.0, \"4066298\": 19.0}"
9   },
10  {
11    "id": 12,
12    "name": "IE360-Project-Trial/Day-5-May",
13    "deadline": "2020-05-06T00:00:00Z",
14    "main_competition": "IE360-Project-Trial",
15    "start_date": "2020-05-05T00:00:00Z",
16    "ground_truth": "{\"6676673\": 2.0, \"32939029\": 10.0, \"31515569\": 22.0, \"85004\": 4.0, \"3904356\": 150.0, \"7061886\": 0.0, \"4066298\": 1.0, \"32939029\": 10.0, \"31515569\": 22.0, \"85004\": 4.0, \"3904356\": 150.0, \"7061886\": 0.0, \"4066298\": 1.0}"
17  }
18 }

```

This is merely a list of each day.

We call these Sub Competitions.

Nothing required, just for you to see the ground truth data for the past days.

/leaderboard

TLDR: This is where you will see the overall leaderboard.

Django REST framework admin ▾

360 Project Api / Leader Board List

Leader Board List

OPTIONS GET ▾

GET /leaderboard/

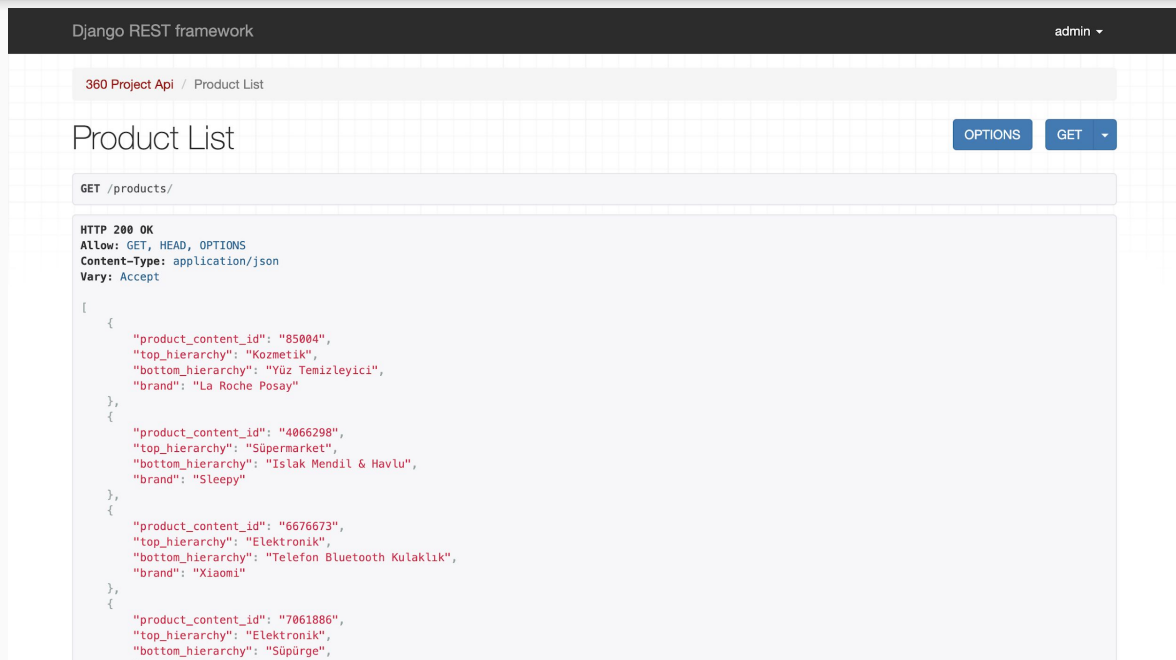
HTTP 200 OK
Allow: GET, HEAD, OPTIONS
Content-Type: application/json
Vary: Accept

```
[
  {
    "url": "http://167.172.183.67/group/21/",
    "username": "grouptest1",
    "total_score": 23.0,
    "students": "2016402408;2016402369"
  },
  {
    "url": "http://167.172.183.67/group/26/",
    "username": "grouptest6",
    "total_score": 22.0,
    "students": "2016402396;2016402378"
  },
  {
    "url": "http://167.172.183.67/group/24/",
    "username": "grouptest4",
    "total_score": 21.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/25/",
    "username": "grouptest5",
    "total_score": 20.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/23/",
    "username": "grouptest3",
    "total_score": 19.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/22/",
    "username": "grouptest2",
    "total_score": 18.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/27/",
    "username": "grouptest7",
    "total_score": 17.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/28/",
    "username": "grouptest8",
    "total_score": 16.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/29/",
    "username": "grouptest9",
    "total_score": 15.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/30/",
    "username": "grouptest10",
    "total_score": 14.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/31/",
    "username": "grouptest11",
    "total_score": 13.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/32/",
    "username": "grouptest12",
    "total_score": 12.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/33/",
    "username": "grouptest13",
    "total_score": 11.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/34/",
    "username": "grouptest14",
    "total_score": 10.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/35/",
    "username": "grouptest15",
    "total_score": 9.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/36/",
    "username": "grouptest16",
    "total_score": 8.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/37/",
    "username": "grouptest17",
    "total_score": 7.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/38/",
    "username": "grouptest18",
    "total_score": 6.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/39/",
    "username": "grouptest19",
    "total_score": 5.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/40/",
    "username": "grouptest20",
    "total_score": 4.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/41/",
    "username": "grouptest21",
    "total_score": 3.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/42/",
    "username": "grouptest22",
    "total_score": 2.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/43/",
    "username": "grouptest23",
    "total_score": 1.0,
    "students": "2017402174;2016402021"
  },
  {
    "url": "http://167.172.183.67/group/44/",
    "username": "grouptest24",
    "total_score": 0.0,
    "students": "2017402174;2016402021"
  }
]
```

Your total score will simply be the sum of ranking points (will be explained soon) you obtained each day.

/products

TLDR: What are we working with? What's 85004? Check this



Django REST framework admin ▾

360 Project Api / Product List

Product List

OPTIONS GET ▾

GET /products/

```
HTTP 200 OK
Allow: GET, HEAD, OPTIONS
Content-Type: application/json
Vary: Accept

[
  {
    "product_content_id": "85004",
    "top_hierarchy": "Kozmetik",
    "bottom_hierarchy": "Yüz Temizleyici",
    "brand": "La Roche Posay"
  },
  {
    "product_content_id": "4066298",
    "top_hierarchy": "Süpermarket",
    "bottom_hierarchy": "Islak Mendil & Havlu",
    "brand": "Sleepy"
  },
  {
    "product_content_id": "6676673",
    "top_hierarchy": "Elektronik",
    "bottom_hierarchy": "Telefon Bluetooth Kulaklık",
    "brand": "Xiaomi"
  },
  {
    "product_content_id": "7061886",
    "top_hierarchy": "Elektronik",
    "bottom_hierarchy": "Süpürge",
    "brand": "Xiaomi"
  }
]
```

Again, nothing you “have to” use here.

Just presented for you to make sense of the data, possibly come up with nice visualizations, and see what you are dealing with :)

Moreover, you can get creative and use related external insights by using the provided information, i.e. using Google Trends.

Other Endpoints

/students : Only admins will have access to this, do not worry about it.

/token : You will get your group tokens from this endpoint. You will need your tokens to send the requests to the API through your programming language of choice. Again, check the sample script and you will see what we mean :)

/ranking : You will see for each day how many ranking points you earned. Leaderboard will simply be the sum of these ranking points.

General Comments

Evaluation:

For each day, we will only evaluate your latest submission. Also, you need to make predictions for all of the products. System will not allow otherwise.

Each day, we will sort each group by the **WMAPE** of their predictions, as denoted in the project definition. Then, according to your daily ranking, you will get your ranking points.

i.e. If there are 20 Groups, the 1st group will get 20 points, 2nd will get 19... and so on.

If you have not made any submissions, you will get 0 ranking points. Please, try to make the most of this experience!

IMPORTANT - Limits:

You will have 200 requests/day as the throttling limit. After this point, you will be banned for 24 hours from sending further requests to the API with your account.

Do not hesitate to
ask for help when
you need!

This submission and evaluation system is implemented only for IE360 Course and students.

The main point is, this experience is truly very close to a real life scenario that you will encounter if you go on to the industry and work on data domain. ie. You will likely get an API to get data and further info, then provide your predictions to another API, just as in this project.

Please get in touch with us and ask your questions if you feel overwhelmed by any of the details.

Contact: mert.yuksekgonul@boun.edu.tr ,
bounie360spring2020@gmail.com

Please include [IE360] in the subject line.

At the end of the project period, this submission system will be open-sourced, for those of you who are interested.

Hope you have fun!

FAQ

I will keep updating this System Manual with the questions coming from you.