Weather Insights API Documentation

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1. Introduction

Weather Insights is a dynamic web-based application designed to provide real-time localized weather data and forecasts to developers.

The Weather Insights API allows developers to retrieve current weather conditions, forecasts for the next 7 days, and historical weather data for any location specified using the latitudinal and longitudinal coordinates.

2. Purpose of the Document

This API document serves as a comprehensive set of documentation for the Weather Insights API.

Ultimately, it aims to help the developers understand the workings of the API better so they can integrate it into their applications.

3. Application Features

3.1 API Overview

3.1.1 Base URL

To use a feature, add given endpoints at the end of the base URL.

Example - https://api.weatherinsights.com/v1/endpoint_name

Base URL
`https://api.weatherinsights.com/v1`

3.1.2 Authentication

To authenticate requests using the API key, pass the API key as a query parameter.

Example - `apiKey`

Authentication

`apiKey`

4. Endpoints

Add the given endpoints at the end of the base URL to use that specific feature.

Example - https://api.weatherinsights.com/v1/current

4.1. Current Weather

This API endpoint is used to get current weather conditions of a given area.

Endpoint

Endpoint
`/current`

Method

Method
`GET`

Parameters

Paíameteís	
`lat` (required)	Latitude of the location
`lon` (required)	Longitude of the location

Response

Response would contain a JSON object containing temperature, humidity, and description of current weather conditions.

Name	Type	Descíiption	Requiíed
temperature	Int	Temperature of place/area	Yes
Humidity	Int	Humidity of place/area	Yes
description	string	Description of current weather conditions	Yes

Sample Request

```
{
  "ObjClass": {
    "Filter_Type": null,
    "Userid": "",
    "Useragent": "",
    "Userip": "",
    "DeviceOSversion": null,
    "DeviceModel": null,
    "IMEINumber": null,
    "AppVersion": null,
    "Latitude": null,
    "Longitude": null
  }
```

Sample Response

```
{
    "temperature":"",
    "humidity":"",
    "description of weather condition":"",
}
```

4.2. 7-Day Forecast

This API endpoint is used to get 7-day weather forecast of a given area.

Endpoint

Endpoint
`/forecast`

Method

Endpoint
`GET`

Parameters

Paíameteís	
`lat` (required)	Latitude of the location
`lon` (required)	Longitude of the location

Response

Response would contain a JSON array of objects, each containing date, temperature, humidity, and description of weather conditions for the next 7 days.

Name	I'ype	Descíiption	Requiíed
date	Date string	Date for the weather data	Yes
temperature	Int	Temperature of place/area	Yes

Humidity	Int	Humidity of place/area	Yes
description	string	Description of current weather conditions	Yes

Sample Request


```
{
  "ObjClass": {
    "Filter_Type": null,
    "Userid": "",
    "Useragent": "",
    "Userip": "",
    "DeviceOSversion": null,
    "DeviceModel": null,
    "IMEINumber": null,
    "AppVersion": null,
    "Latitude": null,
    "Longitude": null
  }
```


Sample Response


```
[
    {
        "date":"",
        "temperature":"",
        "humidity":"",
        "description of weather condition for 7 days":"",
        }
]
```


4.3. Historical Weather

This API endpoint is used to get historical weather conditions of a given area based on the date entered.

Endpoint

Endpoint
`/historical`

Method

Method
`GET`

Parameters

Paíameteís	
`lat` (required)	Latitude of the location
`lon` (required)	Longitude of the location
`date` (required)	Date for which historical data is requested (format: YYYY-MM-DD)

Response

Response would contain a JSON array of objects, each containing date, temperature, humidity, and description of weather conditions for the next 7 days.

Name	I'ype	Descíiption	Requiíed
lat	Int	Latitude of place/area	Yes
lon	Int	Longitude of place/area	Yes
date	Date string	Date for the weather data	Yes

Sample Request

```
{
  "ObjClass": {
    "Filter_Type": null,
    "Userid": "",
```

```
                "Useragent": "",
                "Userip": "",
                "DeviceOSversion": null,
                "DeviceModel": null,
                "IMEINumber": null,
                "AppVersion": null,
                "Latitude": null,
                "Longitude": null
            }
```


Sample Response


```
{
    "temperature":31.5,
    "humidity":50%,
    "description of weather conditions for the requested date":
"Scattered Clouds",
}
```


5. Error Handling

These are the most common types of errors that might occur when using the APIs.

Eíioí Name	HI'IP Response Code/Eíioí Code	I'ype	Descíiption	Remaík
Authentication Failure	401	Invalid/missing authentication credentials		Insert Valid Credentials
Missing Required Parameters	422	Missing Parameters		Key Parameters not found
Server Error	429	Too many requests		
Endpoint Not Found	404	HTTP Error		Wrong endpoint

Connectivity Error	502	Bad Gateway		Check Internet connectivity
Internal Server Error	500	HTTP Error		Server not reachable
Server Unavailable	503	Service Not Available		Server too busy
Permission Error	403	Forbidden Permission Error		

6. Rate Limiting

Weather Insights API allows 1000 requests per day per API key.

```
Calls within one day = 1,000 request calls/ day /API key
```