**HANA FLIGHT PREDICTOR**

**Web Service Developer Guide**

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We have provided several Web service REST access points, for developers to leverage to design other value-added applications/services.

**1. Airline Prediction Service:**

This REST API provides air flight delay predictions based on the data input tuple: (airline, flight number, travel date, arrival airport code, departure airport code). The output will be a JASON object containing

<http://flightprediction.herokuapp.com/predictions/Airline/FlightNumber/Date/ArrivalAirportCode/DepartureAirportCode>

Usage example:

<http://flight-prediction.herokuapp.com/predictions/DELTA/DL123/2012-12-10/SFO/SEA>

The input data is:

Airline: DELTA

Flight number: DL 123

Travel Date: 12/10/2012

Arrival airport code: SFO

Departure airport code: SEA

The output data will be in the following JASON format:

{"flightNumber":"DL123","departDelay":0,"arrivalDelay":0,"departAirport":{"name":"SFO","geoLocation":{"city":"San Mateo, California","longitude":-122.389979,"latitude":37.615223,"zipCode":"94128"}},"arrivalAirport":{"name":"SEA","geoLocation":{"city":"King, Washington","longitude":-122.300497,"latitude":47.44443,"zipCode":"98158"}},"departWeather":null,"arrivalWeather":null,"airline":"DELTA","date":"10 Dec 2012 00:00:00 GMT"}

**2. Real-time Weather Data Service:**

This REST API will allow to check real-time weather data for a specific city.

<http://flight-prediction.herokuapp.com/weathers/CityName>

(The result will be provided in both JSON and CSV formats.)

Usage examples:

**Example 1:** fetch the real-time weather information for the city of “Mountain View” in the format of CSV:

<http://flight-prediction.herokuapp.com/weathers/mountain%20view.csv>

The output is as the following format:

'date', 'tempF', 'windSpeed', 'visibility', 'BarometricPressure','weatherCode', 'weatherDescription', 'weatherIcon'

'Dec 17, 2012 12:00:00 AM', 52.0, 13.0, -1,-1,'266', 'Light drizzle', 'http://www.worldweatheronline.com/images/wsymbols01\_png\_64/wsymbol\_0017\_cloudy\_with\_light\_rain.png

'Dec 19, 2012 12:00:00 AM', 45.0, 9.0, -1,-1,'113', 'Sunny', 'http://www.worldweatheronline.com/images/wsymbols01\_png\_64/wsymbol\_0001\_sunny.png

'Dec 18, 2012 1:09:08 AM', 55.0, 0.0, 16,1016,'122', 'Overcast', 'http://www.worldweatheronline.com/images/wsymbols01\_png\_64/wsymbol\_0004\_black\_low\_cloud.png

'Dec 18, 2012 12:00:00 AM', 44.5, 14.0, -1,-1,'113', 'Sunny', 'http://www.worldweatheronline.com/images/wsymbols01\_png\_64/wsymbol\_0001\_sunny.png

'Dec 21, 2012 12:00:00 AM', 52.0, 22.0, -1,-1,'356', 'Moderate or heavy rain shower', 'http://www.worldweatheronline.com/images/wsymbols01\_png\_64/wsymbol\_0010\_heavy\_rain\_showers.png

'Dec 20, 2012 12:00:00 AM', 50.5, 21.0, -1,-1,'119', 'Cloudy', 'http://www.worldweatheronline.com/images/wsymbols01\_png\_64/wsymbol\_0003\_white\_cloud.png

**Example 2:** fetch the real-time weather information for the city of “Mountain View” in the format of JSON:

<http://flight-prediction.herokuapp.com/weathers/mountain%20view.json>

The output is as the following format:

{"2012-12-17T00:00:00.000+0000":{"temp":52.0,"visibility":-1,"date":"Dec 17, 2012 12:00:00 AM","windSpeed":13.0,"weatherCode":266,"weatherDescription":"Light drizzle","weatherIcon":"http://www.worldweatheronline.com/images/wsymbols01\_png\_64/wsymbol\_0017\_cloudy\_with\_light\_rain.png","barometricPressure":-1},"2012-12-19T00:00:00.000+0000":{"temp":45.0,"visibility":-1,"date":"Dec 19, 2012 12:00:00 AM","windSpeed":9.0,"weatherCode":113,"weatherDescription":"Sunny","weatherIcon":"http://www.worldweatheronline.com/images/wsymbols01\_png\_64/wsymbol\_0001\_sunny.png","barometricPressure":-1},"2012-12-18T00:00:00.000+0000":{"temp":44.5,"visibility":-1,"date":"Dec 18, 2012 12:00:00 AM","windSpeed":14.0,"weatherCode":113,"weatherDescription":"Sunny","weatherIcon":"http://www.worldweatheronline.com/images/wsymbols01\_png\_64/wsymbol\_0001\_sunny.png","barometricPressure":-1},"2012-12-18T01:09:53.750+0000":{"temp":55.0,"visibility":16,"date":"Dec 18, 2012 1:09:53 AM","windSpeed":0.0,"weatherCode":122,"weatherDescription":"Overcast","weatherIcon":"http://www.worldweatheronline.com/images/wsymbols01\_png\_64/wsymbol\_0004\_black\_low\_cloud.png","barometricPressure":1016},"2012-12-21T00:00:00.000+0000":{"temp":52.0,"visibility":-1,"date":"Dec 21, 2012 12:00:00 AM","windSpeed":22.0,"weatherCode":356,"weatherDescription":"Moderate or heavy rain shower","weatherIcon":"http://www.worldweatheronline.com/images/wsymbols01\_png\_64/wsymbol\_0010\_heavy\_rain\_showers.png","barometricPressure":-1},"2012-12-20T00:00:00.000+0000":{"temp":50.5,"visibility":-1,"date":"Dec 20, 2012 12:00:00 AM","windSpeed":21.0,"weatherCode":119,"weatherDescription":"Cloudy","weatherIcon":"http://www.worldweatheronline.com/images/wsymbols01\_png\_64/wsymbol\_0003\_white\_cloud.png","barometricPressure":-1}}

**3. Weather Forecast Data Service:**

This REST API will allow to check weather forecast data for a specific city on a specific date.

<http://flight-prediction.herokuapp.com/weathers/CityName/Date>

(The result will be provided in both JSON and CSV formats.)

**Usage examples:**

**Example 1:** fetch the weather forecast information for the city of “Mountain View” on 12/18/2012 in the format of CSV: (Please note that the data MUST be a future date.)

<http://flight-prediction.herokuapp.com/weathers/mountain%20view/2012-12-18.csv>

The output is as the following format:

'date', 'tempF', 'windSpeed', 'weatherCode', 'weatherDescription', 'weatherIcon'

'Tue Dec 18 00:00:00 UTC 2012', 44.5, 14.0, '113', 'Sunny', 'http://www.worldweatheronline.com/images/wsymbols01\_png\_64/wsymbol\_0001\_sunny.png

**Example 2:** fetch the weather forecast information for the city of “Mountain View” on 12/18/2012 in the format of JSON: (Please note that the data MUST be a future date.)

<http://flight-prediction.herokuapp.com/weathers/mountain%20view/2012-12-18.json>

The output is as the following format:

{"temp":44.5,"visibility":-1,"date":"Dec 18, 2012 12:00:00 AM","windSpeed":14.0,"weatherCode":113,"weatherDescription":"Sunny","weatherIcon":"http://www.worldweatheronline.com/images/wsymbols01\_png\_64/wsymbol\_0001\_sunny.png","barometricPressure":-1}