Data processing technologies (TTD)

Class 09

API (suite)

Using Third party APIS (suite)

Using third party APIs from social networks such as Facebook or Twitter works about the same as we already covered, bur=t with higher security parameters. In fact, you will have to subscribe to a developer account and you will then be given an identification number and a secret code that will be used to create an access token (access key).

Using Instagram API

As an example, we will use Instagram API so you can display the content of your personal account in a web document.

Step 1 : create a developer account

As you may know, Instagram is own and operated by Facebook. So, in order to use Instagram API, you first need to create a Facebook developer account from its developer page : https://developers.facebook.com/

Step 2: create an app

Once you have a developer account, from the main menu, create an app and name it. There will be a few questions to answer. Take note of the AP ID and the secret code in parameters/general from the lateral panel.

Step 3: generate an access token

It is quite a hassle to generate an access token from the developers site. We suggests you use this third party to do so : http://instagram.pixelunion.net/

Step 4: test the endpoint

Using the following endpoint, it will be possible to retrieve the potst from your personal Instagram account to integrate them in a web document

> https://api.instagram.com/v1/users/self/media/recent/?access_token=YOUR_PERSONAL_ACCESS_TOKEN&count=10

```
{
  ▾ pagination: {
        next_max_id: "1956399937277157334_6847703474",
        next_url: https://api.instagram.com/v1/users/6847703474/media/recent?access_token=684
    },
  ▾ data: [
      ▾ {
            id: "2211198016056916942_6847703474",
          ▾ user: {
                id: "6847703474",
                full_name: "Jean Turgeon",
                profile_picture: https://scontent.cdninstagram.com/v/t51.2885-19/s150x150/5338
```

Step 5: make an AJAX request

As usual, retrieving data from an external source requires an AJAX request. Once establish, test the connexion retrieving specific data like in the example below.

```
<div> </div>

<script type="text/javascript">
$.getJSON("https://api.instagram.com/v1/users/self/media/recent/?access_
token=YOUR_PERSONAL_ACCESS_TOKEN&count=10", function(data) {

        $("div").html(data.data[0].user.full_name);

});
</script>
```

Step 6: use a loop to retrieve all the content

To retrieve image contents, you will first need to evaluate the number of elements of the array, create a loop, and then to use concatenations (there are other ways though) in order for the images to display on screen.

```
<div> </div>

<script type="text/javascript">
$.getJSON("https://api.instagram.com/v1/users/self/media/recent/?access_
token=YOUR_PERSONAL_ACCESS_TOKEN&count=10", function(data) {

let x = data.data[0].id;                // Store the total number of elements

for(i=0; i<x.length; i++){

        $("div").append('<img src="' + data.data[i].images.standard_resolu-
tion.url + '">');

}

});
</script>
```

Using feed from newsapi.org

News API offers worldwide news about all possible topics you may think of.

Step 1 : sign in, login in and genegrate an API key

Simply go to https://newsapi.org and click on the «Get API key» button and follow the instructions.

Step 2 : Test the endpoint

```
{
    status: "ok",
    totalResults: 16300,
    articles: [
        {
            source: {
                id: null,
                name: "Businesswire.com"
            },
            author: null,
            title: "Suppliers in Avetta's Network Qualify for More Jobs, Save M
            description: "OREM, Utah--(BUSINESS WIRE)-- #riskmanagement--Suppli
            url: https://www.businesswire.com/news/home/20200213005599/en/%C2%A
            urlToImage: https://mms.businesswire.com/media/20200213005599/en/70
            publishedAt: "2020-02-13T15:37:52Z",
            content: "OREM, Utah--(BUSINESS WIRE)--Suppliers who join Avetta® a
            more jobs, and save time and money through the Avetta Connect Platf
        },
        {
            source: {
                id: null,
                name: "Businesswire.com"
```

Testing the endpoint should result in JSON data similar to the example above. Note that *articles* is an array.

Step 3 : Make an AJAX request and display the data

In order to display content, it's always better to store the data in variables). You will need to use the variable **data** created in the request's function, followed by a call to one of the articles array's index (e.g.: *articles[0]*), and then with the specific data you want to display (in the example : *title*)

```
<div> </div>

<script type="text/javascript">
$.getJSON("https://newsapi.org/v2/everything?q=can-
ada&from=2020-02-01&sortBy=publishedAt&apiKey=YOUR_API_KEY",
function(data) {

        let title = data.articles[0].title;       // Would display the title
        $("div").html(title);                      // of the first article
});
</script>
```

Step 4 : use a loop to retrieve all the content wanted

Using jQuery and concatenation, simply display the wanted data in an HTML structure using CSS to style and position the content.

```html
<section> </section>

<script type="text/javascript">

$(document).ready(function() {

$.getJSON("https://newsapi.org/v2/everything?q=canada&from=2020-02-01&sortBy=publishedAt&apiKey=YOUR_API_KEY",
function(data) {

let x = data.totalResults;            // Total number of articles available

for(i=0; i<x; i++){                   // Looping through articles
        let author = data.articles[i].author;
        let title = data.articles[i].title;

        $("section").html('<div class="title"><a target="_blank" href="' +
data.articles[i].url +'">' + title + '</a></div> <span class="author">(' + author
+ ')</span></article>');
}

});

});
</script>
```

2020-02-13T15:23:23Z
Canadian research officials return from Geneva with plan to tackle coronavirus *(OHS Canada)*
$6.5M earmarked for studying virus that has infected 45,000 people The post Canadian research officials return from Geneva with plan to tackle coronavirus appeared first on OHS Canada Magazine.

2020-02-13T15:21:27Z
L'isolement de détenus sous la loupe de la Cour suprême du Canada *(webmestre@ledevoir.com (Lina Dib))*
Le plus haut tribunal du pays a décidé d'entendre deux appels initiés pour mettre fin à l'isolement préventif.

2020-02-13T15:20:07Z
Kraft Heinz Reports Weak Sales as New CEO Looks for Solutions *(newsfeedback@fool.com (John Ballard))*
The food giant has a lot on its plate in the short term.