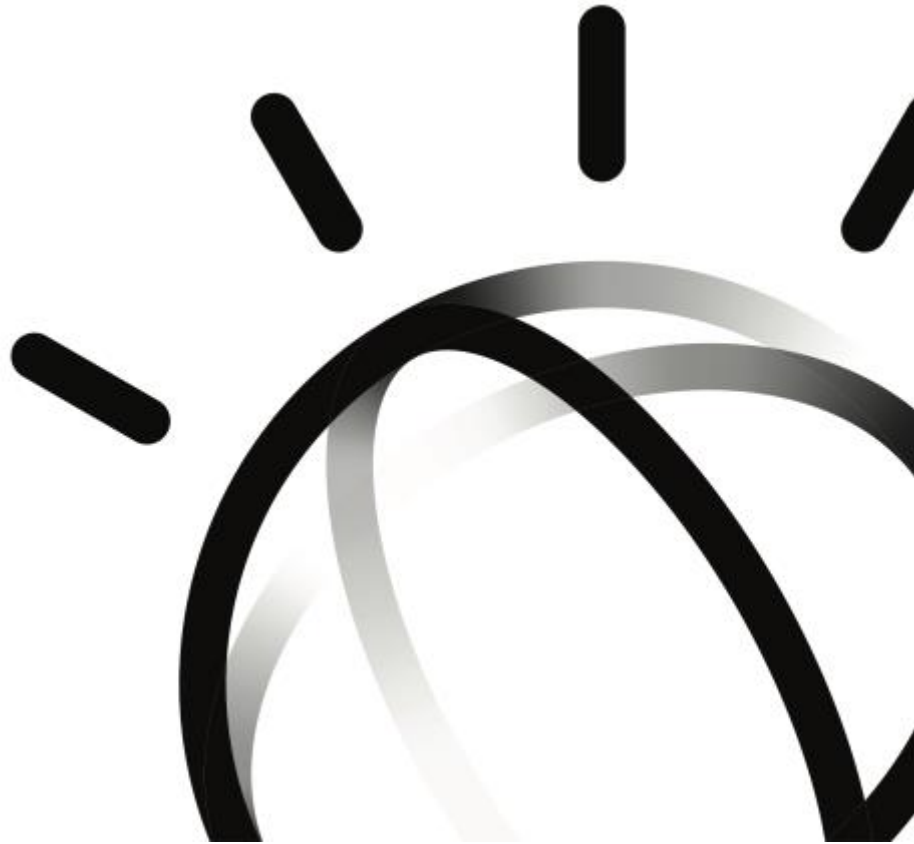# IBM Watson Workshop

# Building Apps and Augmenting them with Cognitive Services

Prepared by Armen Pischdotchian

# Pre-requisite Downloads for the Workshop

# Overview

As you begin your journey into the IBM Developer Cloud, IBM's premier platform as a service (PaaS) where all services reside, take a moment and watch the following videos. It will give you a good idea of IBM's platform and the type of work you will be doing in the up-coming exercises.

- Introductory tour of IBM Cloud
- IBM Cloud developer experience

This document is a pre-requisite for the workshops, some of which require several software downloads that you will need before you begin to work on the exercises included in the IBM Watson Academic Engagements web site.

# Prerequisite

In this section, you will set up the artifacts that you need to run the hands-on labs in the IBM Watson Academic Engagements web site. Estimated time required to complete the pre-requisites: 1 hour.

You must complete the following tasks:

- Setup your IBM Cloud account (required)

- Initialize your IBM Cloud account (required)

- Register for the promo code (required)

- Install Node.js runtime (required)

- Install the Cloud Foundry command line (optional, only if you want to push app to cloud)

- Install Git GUI client (optional)

- Install cURL (required only for one lab: Train Custom Images)

- Install code-friendly text editor (highly recommended)

The **Face Recognition** and the **Train Custom Images** labs requires that you also enroll in the Academic Initiative plan if you are currently enrolled in a school with a valid school email.

The **Train Your Custom Images** workshop is the only one that requires cURL download.

All other workshops require node.js and the CLI command line only if you want to push app to IBM Cloud.

Having a code–friendly text editor and Git GUI is typically a must-have for any development work. You may or may not use it in all the workshops.

## Setup your IBM Cloud Account

You begin by registering with IBM Cloud providing a valid, unique email address. Your email address acts as your user name for IBM Cloud, and you provide a password for it. When you sign up for IBM Cloud, you will be prompted for your demographic information (such as your name and company). An email is sent to the email account that you provide in the registration to confirm that your email account is valid and active.

Complete the following steps:

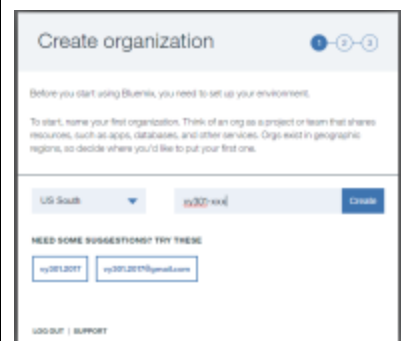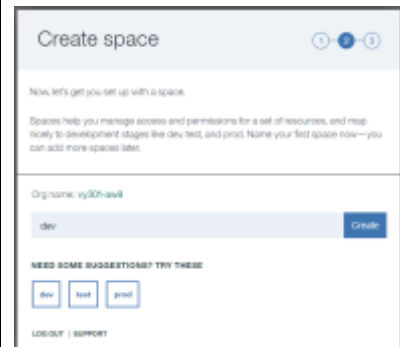| | |
|---|---|
| 1. Open the IBM Cloud website: https://console.IBM Cloud.net/ in a web browser.<br>2. Click **Create a free account**.<br>3. Fill out the form with your personal information. Note that you must use a valid email address, because IBM Cloud sends you an email to verify your account.<br>4. Click **Create Account**. | |
| 5. Check your email at the account that you used to sign up to IBM Cloud.<br>6. Log in back into your IBM Cloud account: https://console.IBM Cloud.net/ | |

## Initialize your IBM Cloud account

The first time you log in, you will be prompted to create a IBM Cloud organization. Each user must have a *unique* organization name within IBM Cloud. Select either of the suggested names such as your short email name or the entire email address. Alternatively, you can specify a unique name of your choosing. To initialize your IBM Cloud account, complete the following steps:

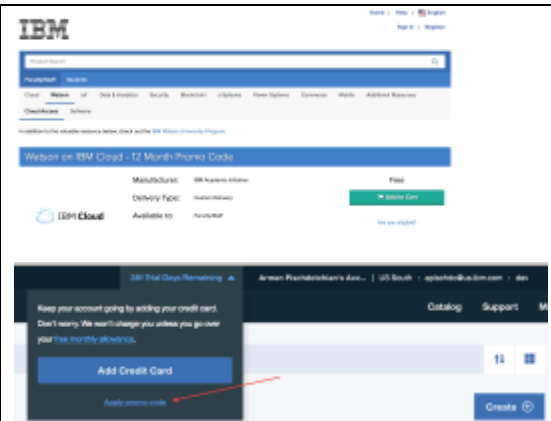| | |
|---|---|
| 1. Use the naming convention to enter your organization name, by selecting either of the suggested choices, or type in your own organization name.<br>2. An organization is the highest concept. When you create an account, you obtain your own "organization." You can invite others to your organization, or get invited to join other organizations.<br>3. Click **Create**. | |

| | |
|---|---|
| 4. After you create an organization, IBM Cloud requires you to create a space within the organization. Spaces must have unique names within an organization, but multiple organizations can have spaces with the same name. Use the suggested naming convention, and per this example, select **dev** as your space name.<br>5. Spaces are used to group related apps and services together. There can be multiple spaces within an organization. When an app or service is created, you must assign a space.<br>6. Click **Create**.<br>7. After you create a space, you will see a page indicating that your IBM Cloud organization is ready to use. Click **I'm Ready.** | |

## Register for the Promo Code

The Promo Code allows students 6 months of free access and faculty one year of free access to IBM Cloud. Additionally, the Promo Code makes available services and other provisions that are limited or unavailable with the usual 30-day free trial.
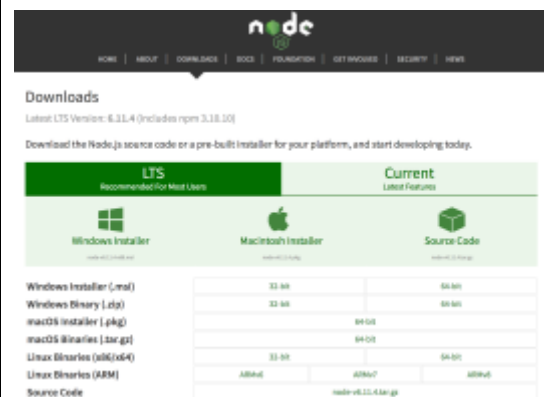
| | |
|---|---|
| 1. Direct your browser to this site:<br>https://ibm.onthehub.com<br>2. Register with the site (This does not have to be your IBM Cloud email, but it must be an email from your school; for example, with an .edu domain)<br>3. Select Watson tile.<br>4. Select whether you are faculty or student.<br>5. Add to shopping cart.<br>6. Proceed with check out.<br>7. Once you have verified the link in your email, you will see the promo code page appear upon clicking the link in your email.<br>8. Copy and paste that link onto the 30-day trail drop down list where it says **Apply promo code**.<br>9. Follow the screen to the **Feature Codes** section. | |

## Install the Node.js runtime

The default installation includes both the runtime and package manager. Make sure to include the installed binaries on your PATH environment variable after installation (typically, the default installation locations that the installer selects does the inclusion).
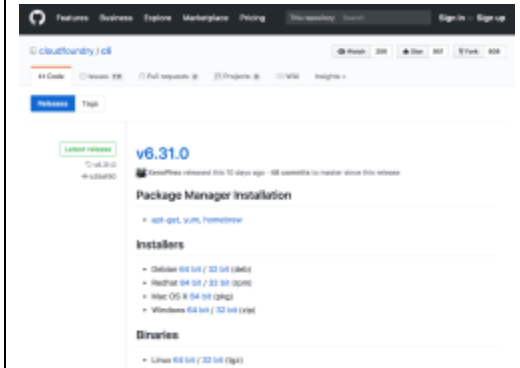
| | |
|---|---|
| 1. Direct your browser to the nodejs.org web site:<br>https://nodejs.org/en/download/<br><br>2. Select the installed option (not the binaries) that is appropriate for your operating system.<br><br>3. Extract the downloaded file and navigate through the wizard to install the application. | |

## Install the Cloud Foundry command line (Optional, needed only when you want to push app to IBM Cloud)

To interact with Cloud Foundry and apps under development, one needs the Cloud Foundry CLI (Command Line Interface). Perform the following steps to install the Cloud Foundry (cf) command line on your workstation.

1. Direct your browser to the GitHub repository:
   https://github.com/cloudfoundry/cli/releases

2. Select the installers (not the binaries) as appropriate for your operating system.

3. Download the installer and navigate through the installation wizard.

## Download the Git GUI client (Optional)

Git-GUI is a portable graphical interface to Git allowing users to make changes to their repository by making new commits, amending existing ones, creating branches, performing local merges, and fetching/pushing to remote repositories. Since the code for most of the workshops resides on Git repositories, then it would be good for users to have the GUI installed for easier access to those repositories without having to use command line. Complete the following steps:

1. Direct your browser and download the OS-specific tool from
   https://git-scm.com/downloads

2. Download the installer appropriate to your operating system

3. Run the installer

4. Follow the steps on the installer UI selecting the default options.

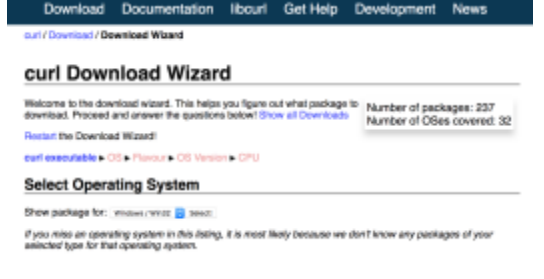## Install cURL (Optional, needed only for the *Train You Custom Images* lab)

**cURL** is a tool to transfer data from or to a server, using one of the supported protocols (HTTP, HTTPS, FTP, FTPS, SCP, SFTP, TFTP, DICT, TELNET, LDAP or FILE). The command is designed to work without user interaction.

To check whether cURL is installed, follow these steps (It typically is on Mac but not on PC).

1. Open a command line (Windows) or terminal (MacOS)

2. Type `curl -V` and press enter

If you see a response that includes a version number (as show to the right), then you already have cURL installed on your computer. Skip this section.

| | |
|---|---|
| 3. Otherwise, to install cURL, direct your browser to this link: https://curl.haxx.se/dlwiz/?type=bin |  |
| 4. Choose your operating system from the drop-down menu then click **Select.** |  |
| 5. You may have to select the version or CPU of your system. 6. Follow the Download Wizard prompts and select your OS-specific options. |  |
| 7. On the final step, make sure to select the SSL-enabled version of cURL and click **Download!** 8. Extract the 7zip file. You may need a tool to extract 7zip file type. 9. Run the installer. |  |

## Install code-friendly text editor.

The built-in Notepad (PC) or Notes (Mac) does not allow any rich indentations of code or color highlights. Working with scripting languages typically is best done using a robust text editor such as **Notepad++** for PC and **Sublime** for Mac.

| | |
|---|---|
| 1. To install Notepad++, direct your browser to this link: https://notepad-plus-plus.org/ 2. Click **Download** from the left menu and select the **current version**. 3. Follow the installation wizard as you accept all default settings. |  |
| 1. To install Sublime, direct your browser to this link: https://www.sublimetext.com/ 2. Click the **DOWNLOAD FOR MAC** button. It generally defaults for your operating system. 3. Follow the installation wizard as you accept all default settings. |  |

Congratulation, you have installed and downloaded all the necessary software and you are now ready to begin with the workshop exercises as depicted here IBM Watson Academic Engagements