Getting Started

ECEN 5053-002 Developing Internet of Things

Professor David Sluiter

IBM Watson

IBM Watson is a question answering computer machine, which can answer questions using Natural Language Processing and Machine Learning. Watson is developed by IBM's DeepQA project by a research team led by principal investigator David Ferrucci.

Watson is named after IBM's CEO Thomas J. Watson. Watson was used on the quiz show Jeopardy in 2011 and won the first prize of $1 million.

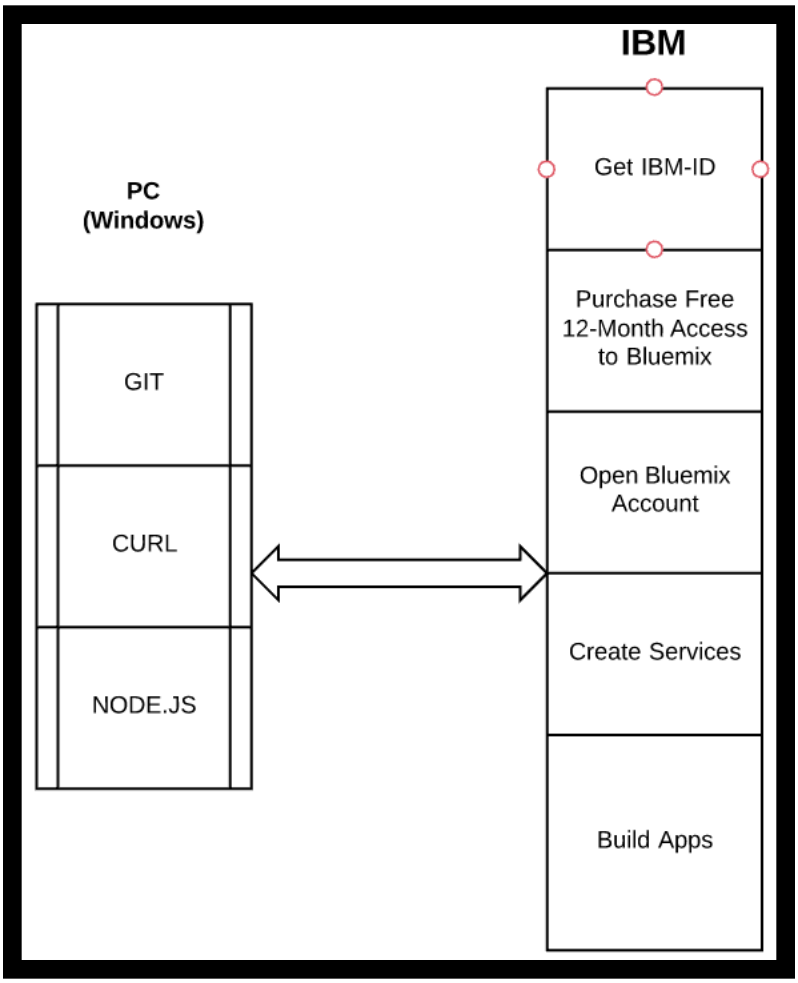
More information about Watson can be obtained here,
https://www.ibm.com/watson/
https://en.wikipedia.org/wiki/Watson_(computer)

Getting Started

This document will provide all the steps which need to be taken before working on the Watson Assignments. This documents also explains the tools and software you need to install to do the following assignments for the ECEN 5053-002 DIIOT course.

Students need to get familiar with Bluemix, which is an implementation of IBM's Cloud Architecture, leveraging Cloud Foundry to enable developers to rapidly build, deploy and manage their cloud applications, while tapping a growing ecosystem of available services and runtime frameworks.

This figure shows the relationship between software on your machine and the services that exists on IBM's side.



Here is a link for more information
https://www.ibm.com/developerworks/cloud/library/cl-bluemix-dbarnes-ny/index.html

Introduction

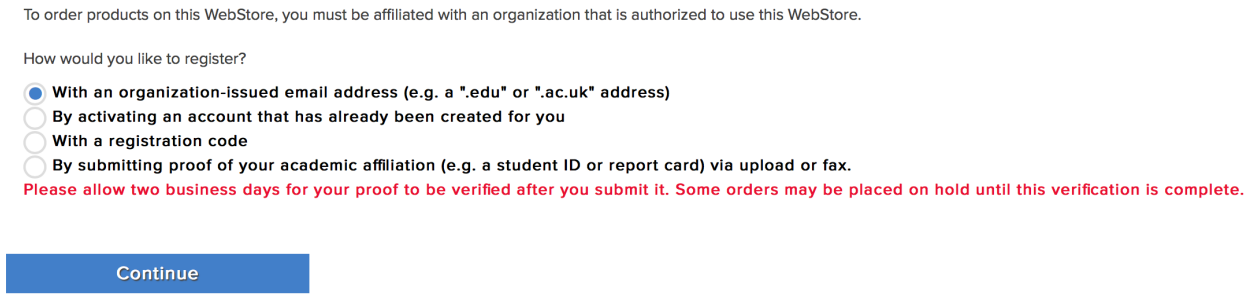
This section provides instructions to help you get started quickly with the IBM Watson™ Developer Cloud services using Node.js as your programming environment.

To make it easy to get up and running with a functional application that uses the REST Application Programming Interface (API) for any Watson service, IBM provides a Node.js package with wrappers that simplify application development.

The package includes simple command-line example applications to let you experiment with any of the available services. Complete the following steps to satisfy the prerequisites

OnTheHub Credentials

Go to the below link and follow the instruction to register for the IBM onthehub account. This is the central place for ordering IBM products such as Bluemix, which we will cover in detail in this document.
https://ibm.onthehub.com/



Here students needs to use their college provided email account (@colorado.edu).

Once registered properly, add the IBM Cloud Promo Code – 12 Months Trial product to your cart and check out.

After completing the above steps, students will receive an email from IBM with their promo code for Bluemix.

For more information, please refer to the following link.
http://www.onthehub.com/ibm/
https://developer.ibm.com/academic/resources/watson-services-educator-guide/

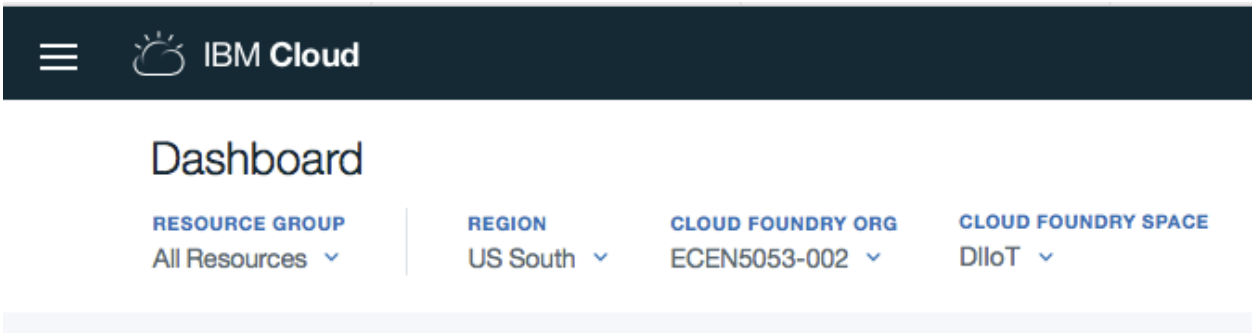
Here is the link to the Bluemix Home Page, students will be using this link to login to Bluemix to use all IBM services.
https://console.bluemix.net/home/

Students are supposed to Sign Up for a Bluemix account here, which will enable them to use the Bluemix environment to develop an application using Watson services.

Enter requested information and click **Create Account**. Look for the confirmation email back to you.

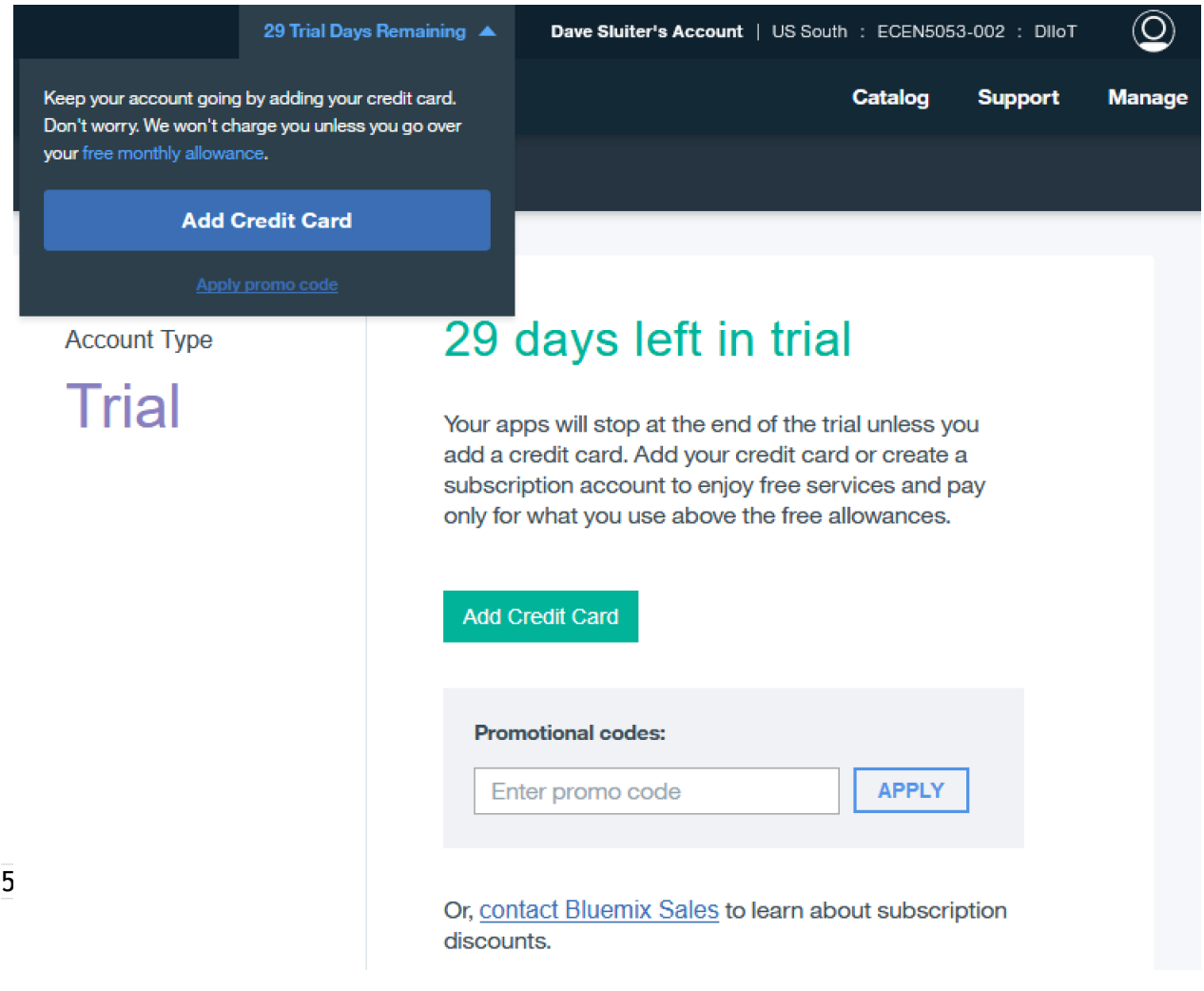
IBM Cloud Services has a notion of
- Region
- Cloud Foundry Organization
- Cloud Foundry Space

When I set up my account I chose the following:

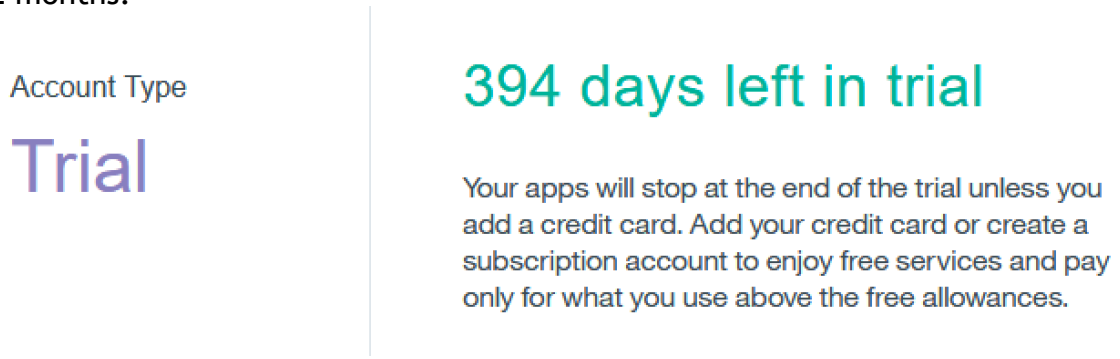


For students to enroll in the IBM Academic Initiative:
http://www.onthehub.com/ibm/

But students are advised to complete the below steps well advanced in time, and not wait for 30 days deadline. **Note**: IBM initially provided 30-day trials. Now it appears the free trial is 12 months, so the steps for updating to 12 months may no loner apply. Students are then supposed to enter their Bluemix Promo Code (from an email received from IBM) once they have logged in the Bluemix for the first time.



After properly following the instructions above, you will get the access of Bluemix for 12 months.



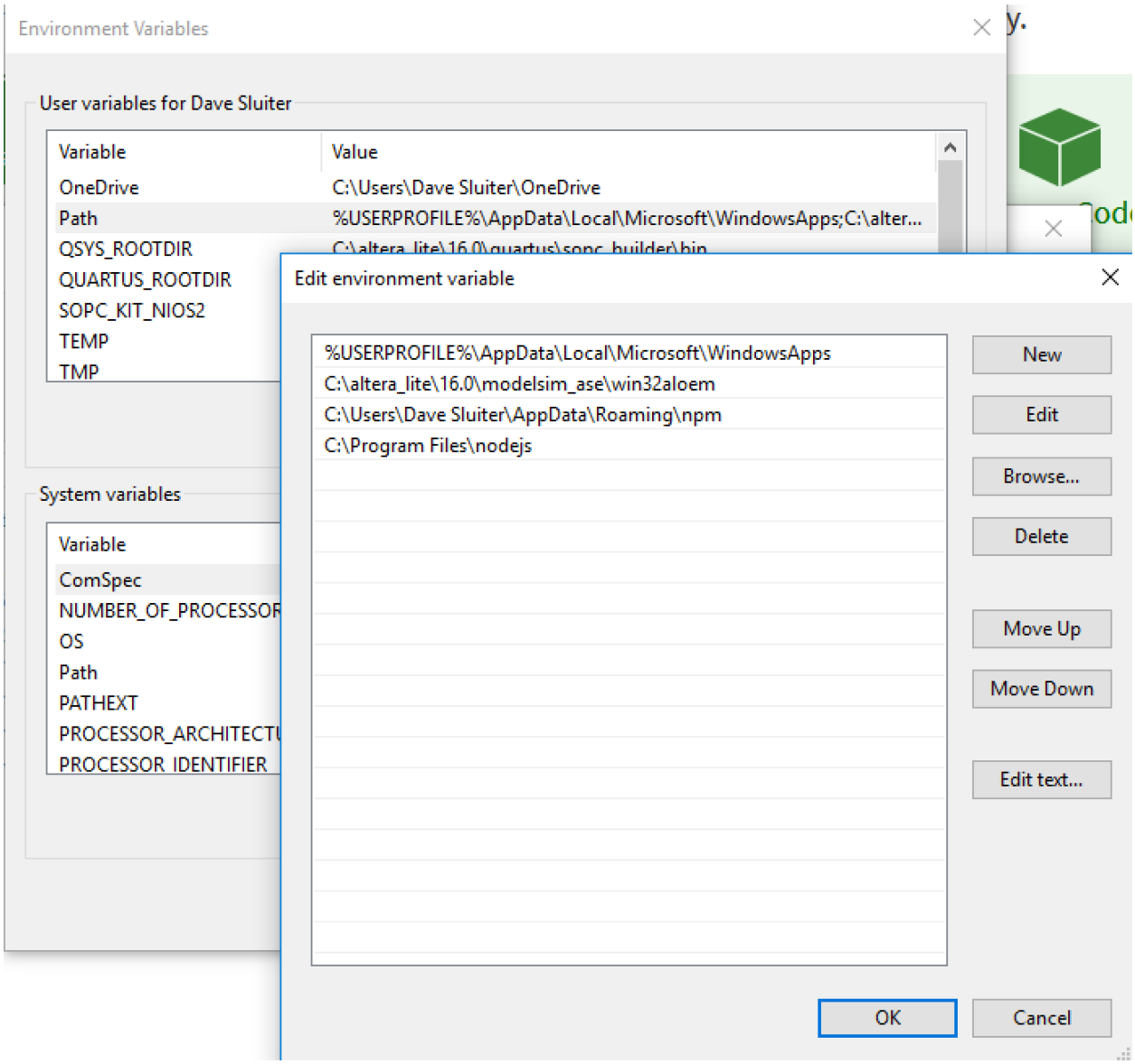
Install Node.js

Install the Node.js runtime

The default installation includes both the runtime and package manager. Make sure to include the installed binaries in your PATH environment variable after installation (typically, the default installation locations that the installer selects does the inclusion).

- Direct your browser to the nodejs.org web site: https://nodejs.org
- Click **Downloads.**
- Select the installer (not the binary) appropriate for your operating system.
- Download and Install.

Do not forget to update your PATH environment variable.
(Below it is shown for Windows 10)



- **Install the CloudFoundry command line**

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

Download and install the most recent installer appropriate for your operating system.

- **Download a Bluemix workshop set of files.**

The ZIP packages contain basic code to get you started with an app.
Direct your browser to a GitHub repository:
https://github.com/

- Search for **bluemix-workshop**

Bluemix workshops 3
Scroll down and select:
apischdo/*Bluemix-workshop*-assets

- Download files using the **Download** button on the page.

- Extract the contents of the artifacts therein to a temporary location on your local system.

- **Download GitHub**

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

- **Download cURL**

To check whether cURL is installed, enter curl -V at a command prompt:
If you see a response that includes a version number, you're all set.
If you need to install cURL, follow this link:
https://curl.haxx.se/dlwiz/?type=bin

Make sure to select the SSL-enabled version of cURL.

```
C:\Users\Vishvesh Raj Siingh>curl -V
curl 7.52.1 (x86_64-pc-win32) libcurl/7.52.1 WinSSL zlib/1.2.8
Protocols: dict file ftp ftps gopher http https imap imaps ldap pop3 pop3s rtsp smb smbs smtp smtps telnet tftp
Features: AsynchDNS IPv6 Largefile SSPI Kerberos SPNEGO NTLM SSL libz
```

Select the version based on your system.

[Note: For Windows 10
Here is another link for download
https://curl.haxx.se/download.html
The release by Viktor Szakáts now contains a bin directory. Go to that bin directory, you will find .exe file.]

- **Download OS appropriate code-friendly editing tool or use one of your favorites.**

If you are using a PC, we recommend using Notepad ++
https://notepad-plus-plus.org/
If you are using Mac, we recommend Sublime Text

If students face any other issues with the above steps, please contact TA or Professor Dave Sluiter.