

Prerequisites: Anaconda and GOW. If you already have anaconda and GOW installed, skip to step 5.

1. Download and install Gnu on windows (GOW) from the following [link](#).

(<https://github.com/bmatzelle/gow/releases/download/v0.8.0/Gow-0.8.0.exe>)

Basically, GOW allows you to use linux commands on windows. In this install, we will

n

```
C:\Users\mgalarny>gow --list
Available executables:
```

```
awk, basename, bash, bc, bison, bunzip2, bzip2, bzip2recover, cat,
chgrp, chmod, chown, chroot, cksum, clear, cp, csplit, curl, cut, dc,
dd, df, diff, diff3, dirname, dos2unix, du, egrep, env, expand, expr,
factor, fgrep, flex, fmt, fold, gawk, gfind, gow, grep, gsar, gsort,
gzip, head, hostid, hostname, id, indent, install, join, jwhois, less,
lesskey, ln, ls, m4, make, md5sum, mkdir, mkfifo, mknod, mv, nano,
ncftp, nl, od, pageant, paste, patch, pathchk, plink, pr, printenv,
printf, pscp, psftp, putty, puttygen, pwd, rm, rmdir, scp, sdiff, sed,
seq, sftp, shasum, shar, sleep, split, ssh, su, sum, sync, tac, tail,
tar, tee, test, touch, tr, uname, unexpand, uniq, unix2dos, unlink,
unrar, unshar, uudecode, uuencode, vin, wc, wget, whereis, which,
whoami, xargs, yes, zip
```

g

zip, tar which GOW provides. Linux Commands on Windows

2. Download and install Anaconda. If you need help, please see this [tutorial](#).
3. Close and open a new command line (CMD).
4. Go to the Apache Spark website ([link](#))

Download Apache Spark™

1. Choose a Spark release: **2.1.0 (Dec 28 2016)**
2. Choose a package type:
Pre-built for Hadoop 2.7 and later
3. Choose a download type: **Direct Download**
4. Download Spark: [spark-2.1.0-bin-hadoop2.7.tgz](#)
5. Verify this release using the [2.1.0 signatures and checksums](#) and [project release KEYS](#).

Download Apache Spark

- a) Choose a Spark release
- b) Choose a package type

- c) Choose a download type: (Direct Download)
- d) Download Spark. Keep in mind if you download a newer version, you will need to modify the remaining commands for the file you downloaded.

5. Move the file to where you want to unzip it.

```
mkdir C:\opt\spark
```

```
mv C:\Users\mgalaryn\Downloads\spark-2.1.0-bin-hadoop2.7.tgz C:\opt\spark\spark-2.1.0-bin-hadoop2.7.tgz
```

```
cd C:\opt\spark\
```

```
mv C:\Users\fatemehsajadi\Documents\spark\spark-2.2.1-bin-hadoop2.7.tgz  
C:\opt\spark\spark-2.2.1-bin-hadoop2.7.tgz
```

6. Unzip the file. Use the bolded commands below

```
gzip -d spark-2.2.1-bin-hadoop2.7.tgz
```

```
tar xvf spark-2.2.1-bin-hadoop2.7.tar
```

7. Download winutils.exe into your **spark-2.2.1-bin-hadoop2.7\bin**

```
curl -k -L -o winutils.exe https://github.com/steveloughran/winutils/blob/master/hadoop-2.6.0/bin/winutils.exe?raw=true
```

8. Make sure you have [Java 7+](#) installed on your machine.

9. Next, we will edit our environmental variables so we can open a spark notebook in any directory.

1. **setx SPARK_HOME C:\opt\spark\spark-2.2.1-bin-hadoop2.7**
2. **setx HADOOP_HOME C:\opt\spark\spark-2.2.1-bin-hadoop2.7**
3. **setx PYSARK_DRIVER_PYTHON ipython**

```
setx PYSARK_DRIVER_PYTHON_OPTS notebook
```

Add ;C:\opt\spark\spark-2.2.1-bin-hadoop2.7\bin to your path.

Notes on the setx command: <https://ss64.com/nt/set.html>

See the video if you want to update your path manually.

10. Close your terminal and open a new one. Type the command below.

```
pyspark
```

Notes: The PYSARK_DRIVER_PYTHON parameter and the PYSARK_DRIVER_PYTHON_OPTS parameter are used to launch the PySpark shell in Jupyter Notebook. The —master parameter is used for setting the master node address. Here we launch Spark locally on 2 cores for local testing.

Copier le répertoire ci-dessous dans le répertoire de travail de Anaconda :

C:\opt\spark\spark-2.2.1-bin-hadoop2.7\data ⇒ C:\Users\username\Anaconda

TP2 :

[https://archive.ics.uci.edu/ml/datasets/3D+Road+Network+\(North+Jutland,+Denmark\)](https://archive.ics.uci.edu/ml/datasets/3D+Road+Network+(North+Jutland,+Denmark))