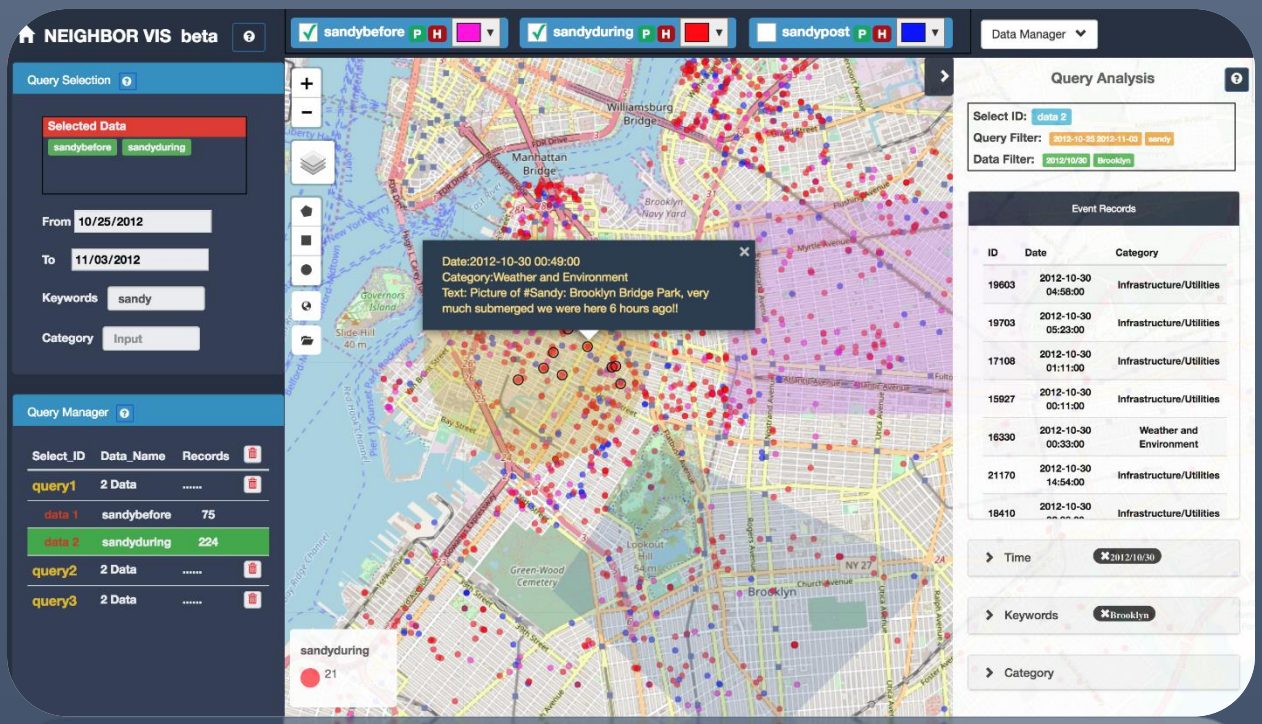


NeighborVis

INSTALLATION GUIDE

http://vis.cs.kent.edu/NeighborVis/

NeighborVis System source code is freely accessible with a BSD licenses. To run the system locally, you needs to prepare following tools:

a. Local Server
b. Mongodb Database
c. Server connect to Mongodb

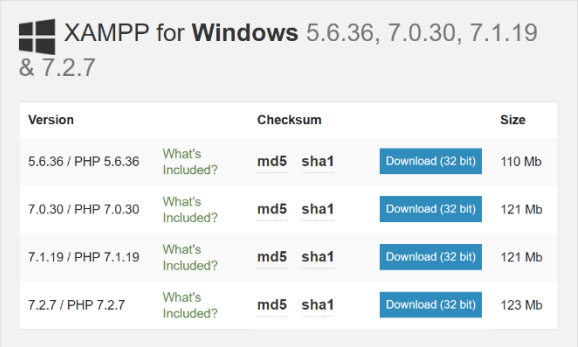
Before everything setup, we assume you are in the Internet connected environment.

a. Installation of XAMPP Server

XAMPP (Windows, Apache, mySQL, PHP) is all in one packages which installs the basic programs, User need to get a localhost running and to be able to build and run PHP scripts.

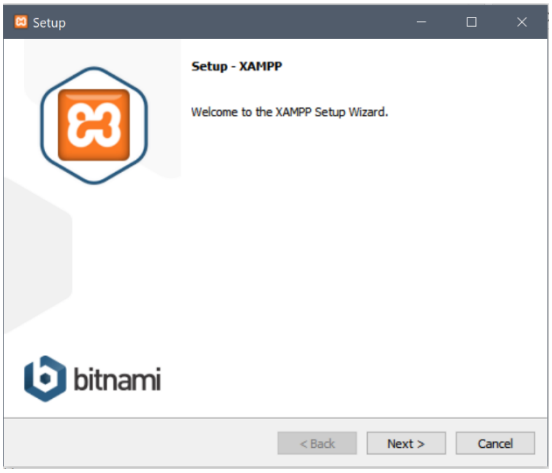
1. Download XAMPP 5.6 from below link.:
   https://www.apachefriends.org/download.html

2. Select correct XAMPP version based on your operating system (Windows, Mac or Linux). (Note. Since NeighborVis are developed based on PHP 5.6, you need to download XAMPP PHP version 5.6)

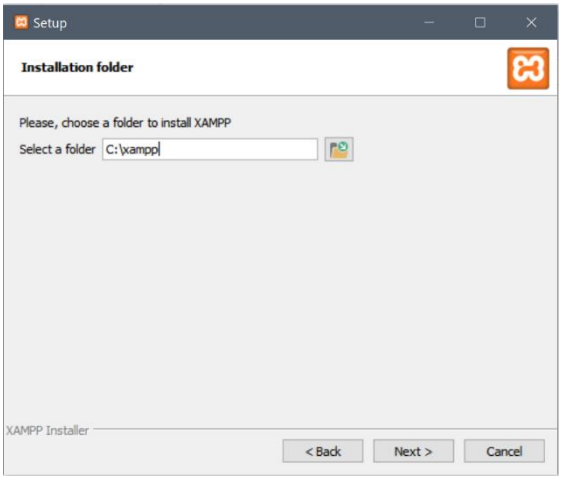


3. Find downloaded XAMPP file and start to install it.

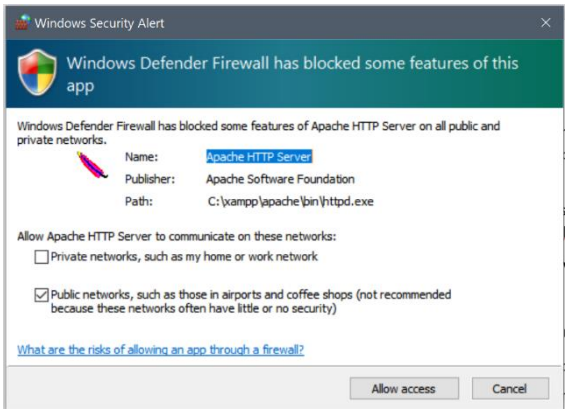
4. Complete all steps to install XAMPP.



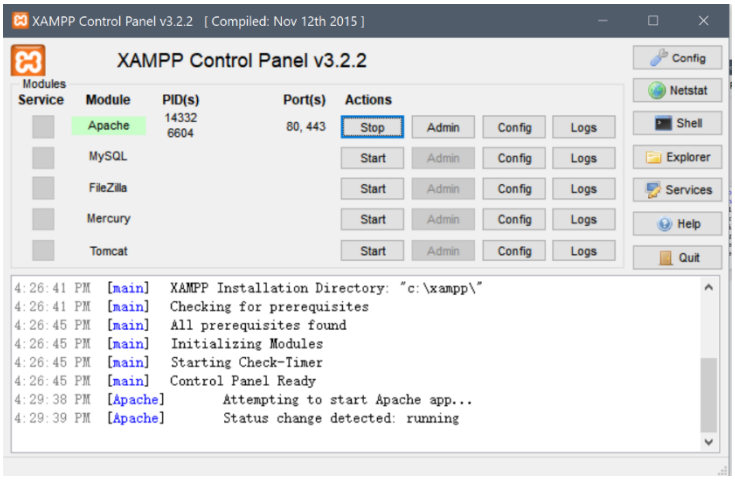
5. Make sure you remember where your XAMPP installed in your Computer. (Default location is C: \xampp in Windows)



6. Allow access to your network



7. After complete installation, start XAMPP Control Panel, active Apache to startup server.



8. Open your Web Brower and type http://localhost/dashboard/ to check the running server.

Sever setup Finished!

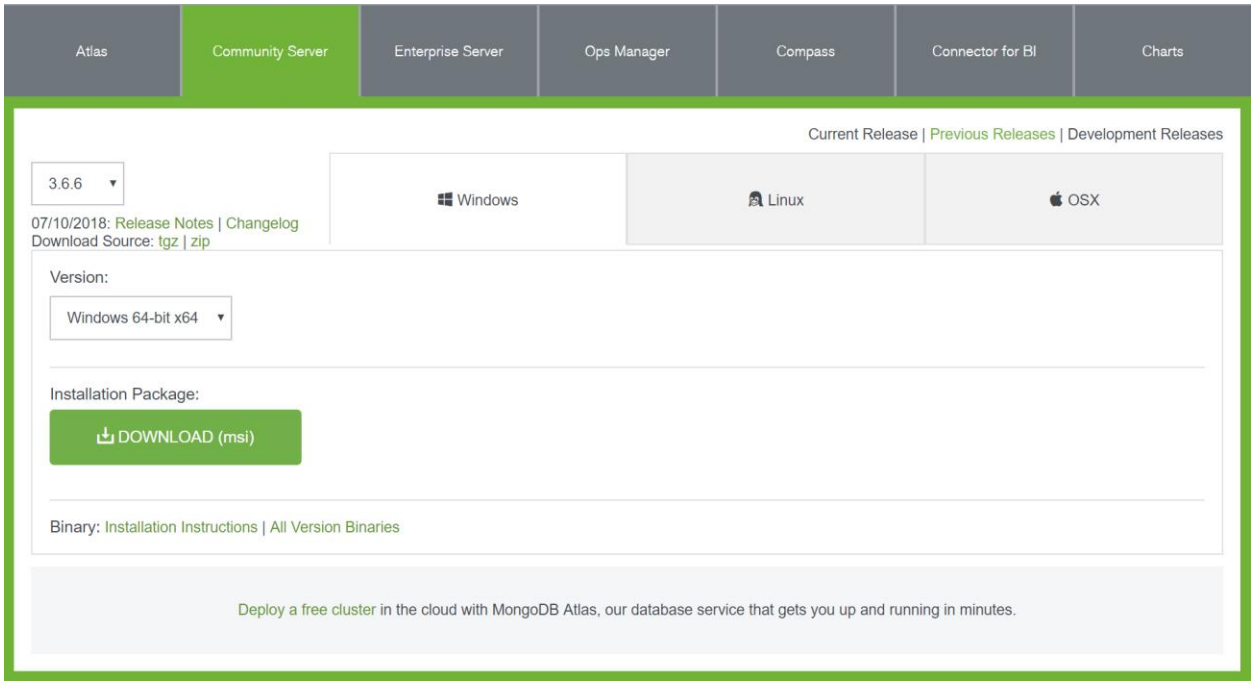
*Note, you are free to install other kind of server as localhost, only make sure PHP version should be 5.6 and you understand how to configure your server to MongoDB database since the configuration steps might vary.

b. Installation of MongoDB database

MongoDB is an open-source document database and leading NoSQL database.

1. Download MongoDB version 3.6 community version from below link:

   https://www.mongodb.com/download-center#previous



2. Please install and configure MongoDB on your device from the official MongoDB website tutorial. Please based on your operating system (Windows, Mac, Linux) to install and configure your Mongodb database:

   Window: https://docs.mongodb.com/tutorials/install-mongodb-on-windows/

   MacOS: https://docs.mongodb.com/tutorials/install-mongodb-on-os-x/

   Linux: https://docs.mongodb.com/tutorials/install-mongodb-on-ubuntu/

3. Make sure MongoDB installed properly on your device, then start running MongoDB database as the back-end.

   The general command for running MongoDB is start mongod.

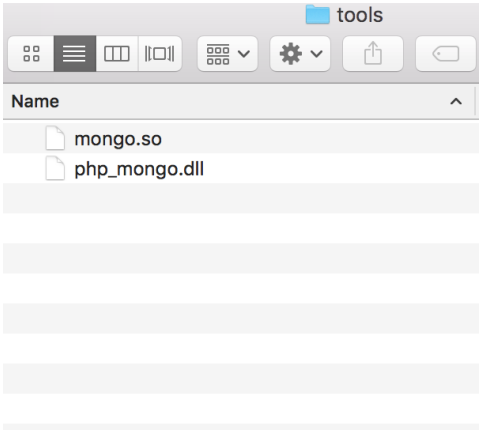
   Windows command: `"C:\Program Files\MongoDB\Server\3.6\bin\mongod.exe"`

   MacOS terminal: `mongod`

   Linux: `sudo service mongod start`

c. Sever Connect to MongoDB

1. **Get the PHP Mongo Driver** from folder "**tools**" in NeighborVis project folder. File "php_mongo.dll" is for Windows users. File "mongo.so" is for Mac or Linux users.



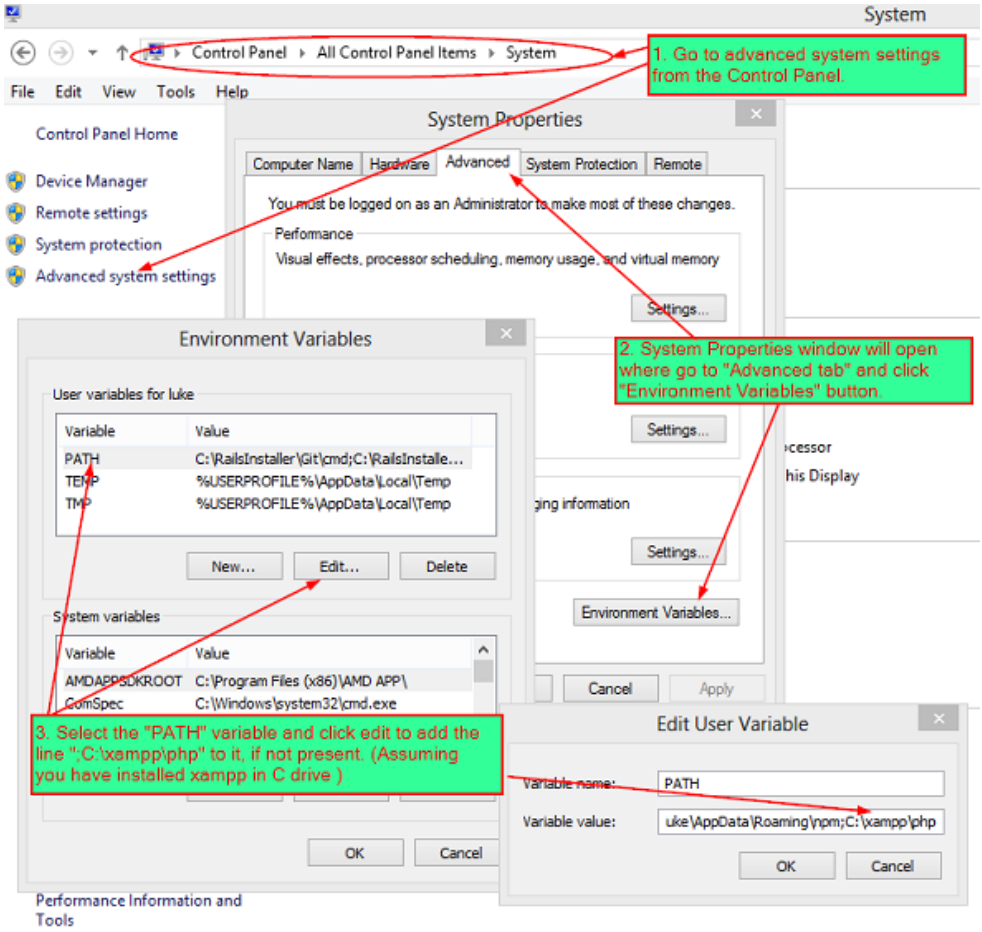
Below steps are based on the example for **Windows** Users.

2. **Copy PHP Mongo DDL to EXT Directory**. Copy and paste the "php_mongo.dll" file to the folder "C:\xampp\php\ext"(Assuming that xampp is installed on C drive).

3. **Add Extension to php.ini**. Open the "php.ini" file from the path "C:\xampp\php" (again, assuming that xampp is installed on C drive), and edit this file to add the name of the ".dll" file as an extension. Add the following line to the extension section in **php.ini** file.

```
extension=php_mongo.dll
```

4. You might have to **Modify the PATH Variable.** Go to control panel, and open the system settings to add the "Environment Variable". Add the path of the XAMPP PHP installation (C:\xampp\php) to the path variable, if it is not present already. This ensures that the newly added "php_mongo.dll" file is loaded when XAMPP is started.



5. Finally, restart the Apache server from the XAMPP control panel. If everything is configured properly, XAMPP should not throw any error messages while starting apache. You can also check the loaded extension by going this link http://localhost/dashboard/phpinfo.php to looking into the PHP information. You will be able to see the loaded extension information on the page as shown below.

mongo

MongoDB Support	enabled
Version	1.6.6
Streams Support	enabled
Supported Authentication Mechanisms	
MONGODB-CR	enabled
SCRAM-SHA-1	enabled
MONGODB-X509	disabled
GSSAPI (Kerberos)	enabled
PLAIN	enabled

Directive	Local Value	Master Value
mongo.allow_empty_keys	0	0
mongo.chunk_size	261120	261120
mongo.cmd	$	$
mongo.default_host	localhost	localhost
mongo.default_port	27017	27017
mongo.is_master_interval	15	15
mongo.long_as_object	0	0
mongo.native_long	0	0
mongo.ping_interval	5	5

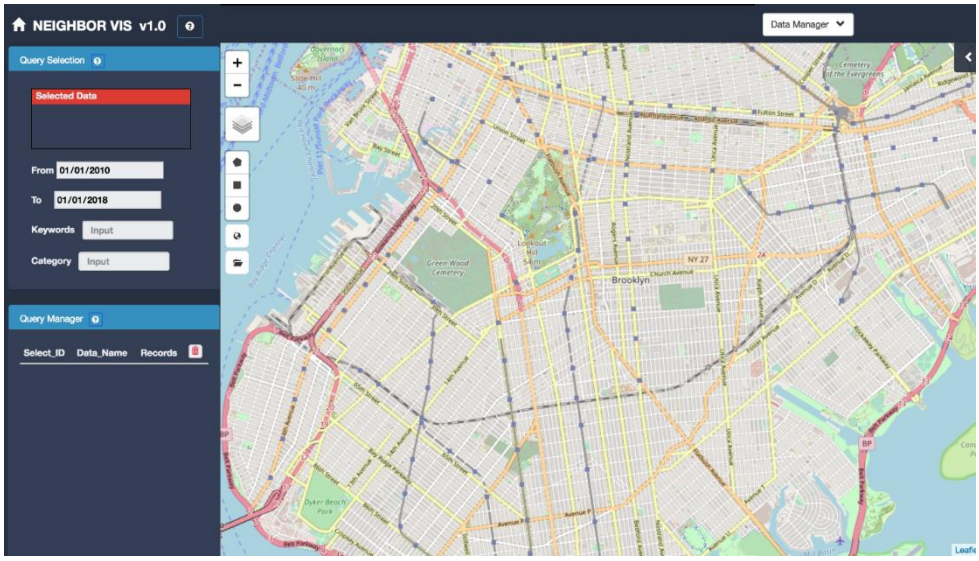
*Note, above server connection to MongoDB steps are based on the example of Windows operating System. Mac user and Linux user have the similar but not exactly steps and folder path. For example, Mac and Linux user need to install driver mongo.so to XAMPP path in /php file, then configure php.ini extension below.

```
extension= “mongo.so”
```

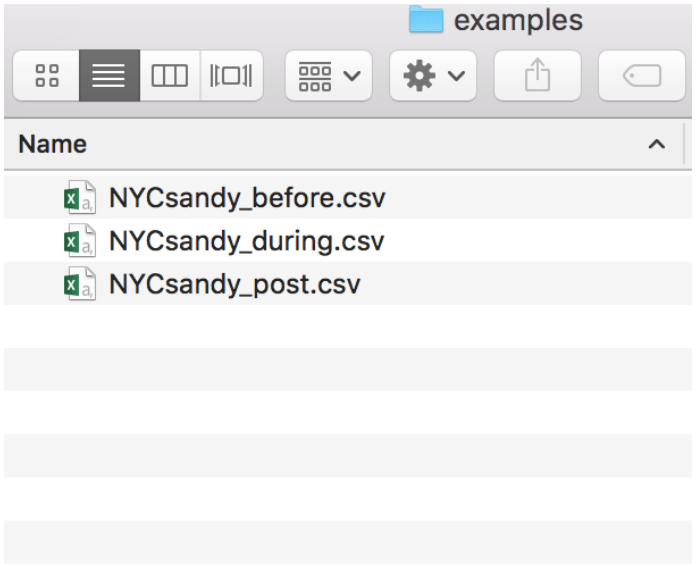
d. Final Step

Copy unpacked NeighborVis project folder to (C:\xampp\htdocs), assuming that XAMPP is installed on C drive. (Mac users and Linux users also need to copy NeighborVis project folder to \htdocs).

Typing the following link: http://localhost/NeighborVis/ to your web browser. The NeighborVis system should initially loading like below.



We provide three example data for you to try and upload from the “example” folder in NeighborVis project.



Finally,

Users can follow NeighborVis User Guide to study how to use NeighborVis system. It is time to discover your GSE data.

Thank you!

References:

1. XAMPP Server: https://www.apachefriends.org/index.html
2. Mongodb Database: https://www.mongodb.com/
3. NeighborVis Website: http://vis.cs.kent.edu/NeighborVis/