

Installation Instruction for GraphViz

Graphviz library is used by scikit-learn to plot decision trees. In the following we point you to the installation instruction. For some who use the window system, you may face additional difficulty to install it on your system. As the problem you face can be system dependent (which OS and machine you are using, etc), you may need to google stack-overflow for additional help.

- To install using graphviz installer, get the instruction from

<https://bobswift.atlassian.net/wiki/spaces/GVIZ/pages/20971549/How+to+install+Graphviz+software>

or from the official site <https://graphviz.gitlab.io/download/>

- One can also install the **graphviz python package** by 'conda install'. But sometimes the package manager (i.e. **conda in anaconda**) does not add the directory of executables to the path automatically. When this happens, one needs to do it manually. Please visit <https://github.com/ContinuumIO/anaconda-issues/issues/1666>, for some discussion on this.

Notice that the command 'conda install graphviz' installs the C-compiled graphviz executable, but 'pip install graphviz' only installs the python binding (a wrapper) of graphviz.

Running 'conda install python-graphviz' installs the python-binding (as in **pip install**) and bind it to its C-compiled graphviz executable.

- **Dot** language and the **dot** program: Dot language is a graph description language which can be rendered into actual graph representations. The files are usually stored in .gv or .dot format. The C-compiled graphviz executables contain the **dot** program which allows us to convert a .dot file into a png file for storage or an svg data structure for webpage display.

Read <https://www.graphviz.org/pdf/dotguide.pdf> for the introduction on using dot with graphviz (not needed for our PML decision tree lecture)