# Dwarf Installation

## Download

Download the appropriate zip file from:

http://software.markdpreston.com/dwarf

It is assumed that you are familiar with downloading software, installing it on your computer and using R.

### Linux

Install R and all of the required libraries via the command line:

```
sudo apt-get install r-base r-cran-rcpp r-cran-mvtnorm
wget http://code.google.com/p/kbac-statistic-implementation/downloads/detail?name=KBAC-110527.zip
```

Then within R install KBAC, SKAT and RInside with the commands:

```
install.packages("RInside")
install.packages("SKAT")
install.packages("KBAC-110527.zip")
```

Run dwarf from the command line with:

./dwarf

## Windows

Download and install R.

Modify line XX in dwarf.bat to specify the installation folder of R.

Install Rcpp, RInside, mytnorm and SKAT using the install.packages command within R.

Download (using the link in the Linux section above) and install KBAC in R. Open a command line window, navigate to the dwarf folder and run dwarf.bat.

#### Source

You will need the blitz, boost, boost\_system, eigen, f2c, gsl, gslblas, R, Rcpp and RInside libraries installed, as well as a rational set of development tools including fortran, gcc, g++, make.

On Linux this is achieved with command lines similar to:

```
sudo apt-get install gfortran gcc g++ make sudo apt-get install libblitzOdev lib-boost-all-dev libboost-system-dev libeigen3-dev libf2c-dev libgs10-dev
```

The R libraries and header files should already be in place from the Linux executable instructions above.

In the source folder run make - the make includes paths to the usual installation places and queries R for the others.

Building on Windows is more complex and not really recommended due to the large number of libraries required. If you do build dwarf for Windows and make a sane set of instructions then please get in touch.