



# Compiling Octave 3.8 for Ubuntu 12.04 – 13.10

December 28, 2013 at 23:13

Note: The octave stable PPA finally (Apr 20 2014) has Octave 3.8.1.

<https://launchpad.net/~octave/+archive/stable>

I would recommend the normal user on Ubuntu 12.04 to consider using the PPA above, it will be much easier than the manual process below.

Download source:

```
wget -P ~/Downloads http://ftp.gnu.org/pub/gnu/octave/octave-3.8.2.tar.bz2
```

Extract to directory:

```
tar -C ~/Downloads -xvf ~/Downloads/octave-3.8*.tar.bz2
```

Prerequisites (Ubuntu 13.10):

```
sudo apt-get install gfortran debhelper automake dh-autoreconf texinfo
texlive-latex-base texlive-generic-recommended epstool transfig pstoeedit
libreadline-dev libncurses5-dev gperf libhdf5-serial-dev libblas-dev
liblapack-dev libfftw3-dev texi2html less libpcre3-dev flex libglpk-dev
libsuitesparse-dev gawk ghostscript libcurl4-gnutls-dev libqhull-dev
desktop-file-utils libfltk1.3-dev libgl2ps-dev libgraphicsmagick++1-dev
libftgl-dev libfontconfig1-dev libqrupdate-dev libarpack2-dev dh-exec
libqt4-dev libqscintilla2-dev default-jdk dpkg-dev gnuplot-x11 libbison-dev
libxft-dev llvm-dev
```

Prerequisites (Ubuntu 12.04.4):

```
sudo apt-get install gfortran debhelper automake dh-autoreconf texinfo
texlive-latex-base texlive-generic-recommended epstool transfig pstoeedit
libreadline-dev libncurses5-dev gperf libhdf5-serial-dev libblas-dev
liblapack-dev libfftw3-dev texi2html less libpcre3-dev flex libglpk-dev
libsuitesparse-dev gawk ghostscript libcurl4-gnutls-dev libqhull-dev
desktop-file-utils libfltk1.3-dev libgl2ps-dev libgraphicsmagick++1-dev
libftgl-dev libfontconfig1-dev libqrupdate-dev libarpack2-dev dh-exec
```

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```
libqt4-dev libqscintilla2-dev default-jdk dpkg-dev gnuplot-x11 libbison-dev
libxft-dev
```

Note: for Ubuntu 12.04, you will have to get [LLVM 3.2 Binaries](#) and extract somewhere — you'll manually link to these in the configure step below.

E.g.

```
wget -P ~/Downloads http://llvm.org/releases/3.2/clang+llvm-3.2-x86_64-
linux-ubuntu-12.04.tar.gz
tar -C ~/Downloads xvf ~/Downloads/clang+llvm-3.2-x86_64-linux-ubuntu-
12.04.tar.gz
```

----

```
cd ~/Downloads/octave-3.8.1
```

### (Ubuntu 13.10)

```
./configure --enable-jit --prefix=/opt/octave3.8
```

### (Ubuntu 12.04.4)

```
./configure --enable-jit --prefix=/opt/octave3.8
LLVM_CONFIG=~/Downloads/clang+llvm-3.2-x86_64-linux-ubuntu-12.04/bin/llvm-
config
```

You may get the error:

```
configure: WARNING: JAVA_HOME environment variable not initialized. Auto-
detection will proceed but is unreliable.
```

On my Ubuntu 13.10 PCs, Java was found automatically despite this error.

```
make
```

This takes about 30 minutes to compile on a Sandy Bridge i7-2600 CPU.

```
make check
```

I get:

PASS 11503

FAIL 0

XFAIL 7

```
sudo make install
```

```
sudo ln -s /opt/octave3.8/bin/octave /usr/local/bin/octave3.8
```

Now to run Octave 3.8 with GUI, at Terminal type:

```
octave3.8 --force-gui
```

- LaTeX
- Linux
- Mac
- MARSIS
- MATLAB / Octave
- matplotlib
- Non-uniform imaging
- Open Source/Open Access
- OpenCV
- Optics
- Papers of Note
- Python
- Radio
- Raspberry Pi
- Scientific Cameras
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- Uncategorized
- Video Codec
- Virtual Machine
- VNC
- Wifi / Bluetooth
- Windows 10
- Windows 7 x64
- Windows 8.1
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### ARCHIVES

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- July 2014  
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- April 2014  
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- March 2014  
(8)
- February 2014  
(10)
- January 2014  
(1)
- December 2013  
(11)
- November 2013

You can of course make a bash alias to always add that `--force-gui` for you.

```
nano ~/.bash_aliases
```

and add the line

```
alias octave38="octave3.8 --force-gui"
```

Notes re: LLVM version:

Ubuntu 13.10 llvm-dev is currently LLVM 3.2. As of this comment from mtmiller on January 2014, Octave 3.8 requires LLVM 3.2 or 3.3 to compile:

<https://savannah.gnu.org/bugs/?41061#comment9>

Ubuntu 12.04 defaults to LLVM 2.9, which is now too old for Octave 3.8. I would suggest considering the [Pre-Built Binaries](#)

Note: Ubuntu 14.04 has Octave 3.8 by default – yay!

Note: As Ian notes in the comments, `surf()` seems to be broken with the otherwise fast and great FLTK plotting. As Ian notes, when you need `surf()`, circumvent this problem by falling back to `gnuplot` by typing in Octave:

```
graphics_toolkit('gnuplot')
```

Reference (Jordi G. H.):

<http://octave.1599824.n4.nabble.com/Please-release-RC1-to-octave-unstable-PPA-td4659924.html>

By [Michael Hirsch](#) | Posted in [MATLAB / Octave](#) | Tagged [build](#)

## 34 Comments

**David** posted on January 1, 2014 at 12:30

Thanks 😊 It was helpful  
Is it necessary JAVA for Octave? Since I got a warning

**Nick DeMarco** posted on January 20, 2014 at 13:03

Great instructions. It's a rare thing to follow web instructions and have something work the first time. I really appreciate your efforts. Octave is really a great tool.

**Jeff** posted on January 21, 2014 at 18:18

I used your ppa directions for octave 3.6.4. That was great thanks.  
Do you suppose you could set up a similar ppa for octave 3.8.0,  
if you don't mind asking?  
That would be AWESOME! 😊

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→ October 2013

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[Andy - G3TDJ](#) on [SpectraVue 3.3 on WINE Linux](#)

[Burford Furman](#) on [Compiling Octave 3.8 for Ubuntu 12.04 – 13.10](#)

### TAGS

Thanks in advance

**Rajan** posted on January 23, 2014 at 07:37

Thank you a tons!! That went superb without a hitch! Very nice of you to help folks like me who rely on Ubuntu software center to do everything for us.

**Hans** posted on January 26, 2014 at 01:58

Thanks, it was so easy to compile!  
I just had to wait a bit on my old laptop.

Have one question though, I am not sure if you have any idea. When plotting I can use tex such as `\pi` or subscripts and non-ascii such as `ääö`, which show up correctly, but when printing to pdf I get either just `pi` or gibberish. Any idea if it is related to octave, fltk or ghostscript?

**Michael Hirsch** posted on January 26, 2014 at 17:20

Hello Hans,

The TeX parser for plotting with FLTK toolkit is new for Octave 3.8.0, however, it is known that TeX is only shown for screen display, and TeX is NOT printable with Octave 3.8.0.

Reference: <http://www.gnu.org/software/octave/NEWS-3.8.html>

You can check if you're using FLTK or Gnuplot for plotting in Octave 3.8 by typing in Octave:

```
graphics_toolkit
```

**Michael Hirsch** posted on January 26, 2014 at 17:22

Hello Jeff,

As of this date there isn't yet a PPA for Octave 3.8 that I know of. However given the demand, I would assume someone will soon. Unfortunately I don't have the time to do so. Some discussion at:

<http://octave.1599824.n4.nabble.com/Re-Octave-3-8-0-Released-td4661060.html>

**Bernie Schattka** posted on January 26, 2014 at 19:37

Many thanks.

No issues compiling and installing Octave 3.8.

**Nick DeMarco** posted on January 27, 2014 at 12:21

If you install in a non-standard directory (i.e. `octave3.8`) Octave packages will not be recognized without extra work.

7zip Anaconda bluetooth  
bug draftsight Fedora Fedora  
16 ffmpeg FTP github GMRS  
Google Earth hamlib Ham  
Radio HDF5 ImageJ  
Imagemagick Matlab  
Bug MATLAB Central  
matplotlib MEX  
nmap Numba numpy PDF  
plots plotting python3  
R2014b remote control  
RS232 serial RTL2832  
Scientific Linux 6.2 Spyder SSH  
sshd Ubuntu Ubuntu  
11.10 ubuntu  
12.04 ubuntu  
14.04 VirtualBox VNC  
vPro wget wine

**Ravi S Iyer** posted on January 27, 2014 at 13:21

Thanks a trillion, Mike.

A few tweaks –

1. Added bison to the list of installs (sudo apt-get ...);
  2. Added to .bashrc:  
`export JAVA_HOME=$(readlink -f /usr/bin/javac | sed "s:/bin/javac::");`  
Ran source .bashrc AFTER the 'sudo apt-get install ...'
  3. Instead of a script, added the following line to .bash\_aliases:  
`alias octave="octave3.8 --force-gui & "`
- Voila! Type 'octave' in the command line and you get the GUI.

**Michael Hirsch** posted on January 27, 2014 at 15:04

Hello Nick,

How do you prefer to install the packages? To my knowledge, they will install under the \$HOME directory if running non-sudo.

**niket** posted on January 31, 2014 at 09:35

Worked wonders! Thanks!

**Collin Starkweather** posted on February 3, 2014 at 00:01

Thanks for posting the build directions. The default Ubuntu package is horribly out of date.

The directions above seem to work for many of the other folks who posted comments, but while build seems to go OK for me, make check against 12.04.4 gives me

```
—
make[2]: Leaving directory `/home/cstarkweather/archives/octave-3.8.0/octave-3.8.0'
make[1]: Leaving directory `/home/cstarkweather/archives/octave-3.8.0/octave-3.8.0'
make -C test check
make[1]: Entering directory `/home/cstarkweather/archives/octave-3.8.0/octave-3.8.0/test'
Makefile:2552: warning: overriding commands for target `check'
Makefile:2140: warning: ignoring old commands for target `check'
../run-octave --norc --silent --no-history ./fntests.m .
make[1]: *** [check] Segmentation fault
—
```

./run-octave likewise segfaults.

Where does one go from there?

**Collin Starkweather** posted on February 3, 2014 at 03:47

I should also note that I upgraded to 13.10 and encountered the same issue.

**Michael Hirsch** posted on February 3, 2014 at 07:19

Hi Collin, I would consider compiling within a virtual machine. Maybe your 12.04 and 13.10 upgrade had something installed that somehow conflicts with a prerequisite.

**Pascal** posted on February 12, 2014 at 10:38

Dear Michael

I follow our procedure for installation with Ubuntu12.04. The make process stop with the following console msgs:

....

make[2]: quittant le répertoire « /octave-3.8.0/libgui »

Making all in src

make[2]: entrant dans le répertoire « /octave-3.8.0/src »

```
g++ -DHAVE_CONFIG_H -I. -I.. -I../liboctave/array -I../liboctave/cruft/misc -
I../liboctave/numeric -I../liboctave/system -I../liboctave/util -I../libinterp -I../libinterp/corefcn -
I../libinterp/corefcn -I../libgnu -I../libgnu -I../libgui/src -mieee-fp -Wall -W -Wshadow -Wold-style-
cast -Wformat -Wpointer-arith -Wwrite-strings -Wcast-align -Wcast-qual -g -O2 -pthread -MT
octave_gui-main-gui.o -MD -MP -MF .deps/octave_gui-main-gui.Tpo -c -o octave_gui-main-
gui.o `test -f 'main-gui.cc' || echo './`main-gui.cc
mv -f .deps/octave_gui-main-gui.Tpo .deps/octave_gui-main-gui.Po
/bin/bash ../libtool --tag=CXX --mode=link g++ -mieee-fp -Wall -W -Wshadow -Wold-style-cast -
Wformat -Wpointer-arith -Wwrite-strings -Wcast-align -Wcast-qual -g -O2 -pthread -no-
undefined -o octave-gui octave_gui-main-gui.o ../libgui/liboctgui.la ../libinterp/liboctinterp.la
../liboctave/liboctave.la -lutil -lm
```

```
libtool: link: g++ -mieee-fp -Wall -W -Wshadow -Wold-style-cast -Wformat -Wpointer-arith -
Wwrite-strings -Wcast-align -Wcast-qual -g -O2 -pthread -o .libs/octave-gui octave_gui-main-
gui.o ../libgui/.libs/liboctgui.so ../libinterp/.libs/liboctinterp.so ../liboctave/.libs/liboctave.so -lutil -
lm -pthread -Wl,-rpath -Wl,/opt/octave3.8/lib/octave/3.8.0
```

```
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zpthemv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cgmvv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zhemv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sscal'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_strmv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_scasum'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dtrmv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_drotg'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zptsyrk'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cmoveConj'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dgbmv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dspr2'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dsbmv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ctrmv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dsymv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dtpmv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ssyreflect'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zhbmvm'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_izamax'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_srot'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ztpmv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cGetNB'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_srotg'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_scopy'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ztpsv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dgemv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dscal'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cscalConj'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_strsv'
```



```
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zhpr'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cptsyr2k'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sspr'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dptsyrk'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cher2'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_stbmV'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dptgemm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zpttherk'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zpttrsm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_icamax'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_drotmg'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zhpr2'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cher'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dspr'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dtbmv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_stpmv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cpther2k'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sasum'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sswap'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_srotmg'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ccopyConj'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_srotm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dptsymm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zptsymm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cprrmm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zptrrmm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_drotm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cswap'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ccplxinvert'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cptsyrk'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dger'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cdotc_sub'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dsyr2'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zcplxinvert'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cgeru'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ssymv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_chemv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zGetNB'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cprrsm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zaxpy'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cprrhemm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_stbsv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dtbv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dset'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zgemv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dtrsv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ctbmV'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zgbmv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sger'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sdsdot'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ssbmv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sspr2'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_chbmV'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dznm2'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zptsyr2k'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_chpr2'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dsdot'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_daxpy'
```

```
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sgbmv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zgerc'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sgemv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dswap'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zscalConj'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zher'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_saxpby'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sGetNB'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cdotu_sub'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_csrot'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cgblmv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ztrsv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_saxpy'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_chpr'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zgeru'  
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/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zset'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_xerbla'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_stpsv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cptgemm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dzasum'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dsyr'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zmoveConj'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ddot'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ctpmv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ztbsv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zdotu_sub'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ctrsv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dGetNB'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dsyreflect'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ztbmv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sptsyr2k'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ctpsv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_spttrmm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zcopy'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_spttrsm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_idamax'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dpttrsm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dtpsv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dcopy'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zaxpby'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sdot'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zscal'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_daxpby'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zsyreflect'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_isamax'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dasum'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_chpmv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dptsyr2k'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dspmv'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ssyr2'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_caxpby'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sset'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zdrot'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_csyreflect'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zptther2k'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zptgemm'  
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zher2'
```



```

/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cset'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_drot'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_scnrm2'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dpttrmm'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sptsyrk'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_snrm2'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zswap'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_crotg'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ccopy'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sptgmm'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cptsymm'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cptherk'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zdotc_sub'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zhpmv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_caxpy'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_dnrm2'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zcopyConj'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cscal'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cgerc'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sspmv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_sptsymm'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ctbsv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ztrmv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ssyr'
collect2: ld returned 1 exit status
make[2]: *** [octave-gui] Erreur 1
make[2]: quittant le répertoire « /home/lauridou/Public/octave-3.8.0/src »
make[1]: *** [all-recursive] Erreur 1
make[1]: quittant le répertoire « /home/lauridou/Public/octave-3.8.0 »
make: *** [all] Erreur 2

```

Can you give me any information on what to do?

Best regards

Pascal

**Pascal** posted on February 14, 2014 at 00:54

Dear Michael

I follow our procedure for installation with Ubuntu12.04. The make process stop with the following msgs:

....

```

make[2]: entrant dans le répertoire « /Public/octave-3.8.0/src »
g++ -DHAVE_CONFIG_H -I. -I.. -I../liboctave/array -I../liboctave/cruft/misc -
I../liboctave/numeric -I../liboctave/system -I../liboctave/util -I../libinterp -I../libinterp/corefcn -
I../libinterp/corefcn -I../libgnu -I../libgnu -I../libgui/src -mieee-fp -Wall -W -Wshadow -Wold-style-
cast -Wformat -Wpointer-arith -Wwrite-strings -Wcast-align -Wcast-qual -g -O2 -pthread -MT
octave_gui-main-gui.o -MD -MP -MF .deps/octave_gui-main-gui.Tpo -c -o octave_gui-main-
gui.o `test -f 'main-gui.cc' || echo './'` main-gui.cc
mv -f .deps/octave_gui-main-gui.Tpo .deps/octave_gui-main-gui.Po
/bin/bash ../libtool --tag=CXX --mode=link g++ -mieee-fp -Wall -W -Wshadow -Wold-style-cast -
Wformat -Wpointer-arith -Wwrite-strings -Wcast-align -Wcast-qual -g -O2 -pthread -no-
undefined -o octave-gui octave_gui-main-gui.o ../libgui/liboctgui.la ../libinterp/liboctinterp.la
../liboctave/liboctave.la -lutil -lm
libtool: link: g++ -mieee-fp -Wall -W -Wshadow -Wold-style-cast -Wformat -Wpointer-arith -
Wwrite-strings -Wcast-align -Wcast-qual -g -O2 -pthread -o .libs/octave-gui octave_gui-main-
gui.o ../libgui/.libs/liboctgui.so ../libinterp/.libs/liboctinterp.so ../liboctave/.libs/liboctave.so -lutil -

```

```

lm -pthread -Wl,-rpath -Wl,/opt/octave3.8/lib/octave/3.8.0
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zpthemm'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_cgemv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_zhemv'
....
....
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ctbsv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ztrmv'
/usr/lib/liblapack.so.3gf: undefined reference to `ATL_ssyr'
collect2: ld returned 1 exit status
make[2]: *** [octave-gui] Erreur 1
make[2]: quittant le répertoire « /home/autridou/Public/octave-3.8.0/src »
make[1]: *** [all-recursive] Erreur 1
make[1]: quittant le répertoire « /home/autridou/Public/octave-3.8.0 »
make: *** [all] Erreur 2

```

Can you give me any information on what to do?

Best regards

Pascal

**Ian** posted on February 17, 2014 at 12:07

Great tutorial all went well until I tried to plot, surf(peaks) this would give segmentation fault with command line and gui, using elementary OS which is Ubuntu 12.04 based.

The problem appears to be the default fltk toolkit if I change to gnuplot as follows  
 graphics\_toolkit('gnuplot') everything seems to be ok. I created an .octaverc file in my home directory with the graphics\_toolkit("gnuplot") command to fix my issue.

The strange thing is once I have done a plot with gnuplot I can change back to the fltk toolkit and it will now work.

I posted this just in case anyone else is having the same problem and to say thank you for a great tutorial.

**Raffael** posted on February 18, 2014 at 08:48

Hey Michael,

also big thank you from me! Nick DeMarco (comment) nails exactly what I thought – you rarely find such a non-trivial process description which actually works exactly like that! I am new to Ubuntu and I don't think I could have figured this out myself without putting a lot of time into it!

I am curious about a few points:

- a) Why does Octave complain about Java?
- b) What subjects should I read about to be able to figure out those compilation/installation steps myself without having to become a C++ programmer?

Kind regards

Raffael

**hochli ulrich** posted on February 19, 2014 at 07:41

Hi Michael,  
on ubuntu 12.04 'sudo apt-get install gfortran debhelper automake dh-autoreconf texinfo  
.....' I get  
Unable to locate package llvm-3.2-dev  
Downloading and untaring into octave-3.8.0 does not help.  
Similar problem with PCRE.  
How deal with these libearies

Ulrich

**hochli ulrich** posted on February 21, 2014 at 08:05

it needed 'sudo aptitude install' rather than sudo 'apt-get install'. but zhen ok. good instructions.

ulrich

**nickolas** posted on February 24, 2014 at 15:27

Thnx man everything worked just fine!  
Running octave 3.8 with gui on Linux Mint 16 Cinnamon!  
(Followed the Ubuntu 13.10 instructions)



**Michael Hirsch** posted on March 12, 2014 at 23:00

Hello Jeff, I can say that Ubuntu 14.04 has Octave 3.8 included without any extra PPAs.

**Michael Hirsch** posted on March 12, 2014 at 23:04

Hello Ian — thanks! I notice exactly the same thing, that I get Segmentation Fault upon  
executing  
surf(peaks)  
or  
surf(rand(100))  
etc.  
And, as you noted, that manually typing (or as you do, putting in .octaverc)  
graphics\_toolkit('gnuplot')  
and then  
surf(peaks)  
will work. I would consider submitting a bug report.

**Michael Hirsch** posted on March 12, 2014 at 23:08

Hi Raffael,  
This JAVA\_HOME error is because JAVA\_HOME isn't set in your environment. I.e.  
echo \$JAVA\_HOME

returns nothing.

In our case, Octave installer searches and finds Java anyway.

I think practice at compiling programs is a good way to learn about what can go wrong — usually it is not a problem with the program (hopefully!), but rather that you don't have the needed version of some dependency installed.

**Peter Roos** posted on March 19, 2014 at 18:22

Hi,

I have two prerequisite packages that I can't install on Ubuntu 12.04, because they are conflicting with another software (ROS – <http://www.ros.org>). The two packages are libftk1.3-dev libcurl4-gnutls-dev.

Based on the LLVM 3.2 solution you provided, I tried to pull off the same for the former two packages. Downloaded the .deb packages from Ubuntu Package Archive, and extracted them next to the octave3.8.1 folder. I looked at the configure script, and based on what I had found, I created the following configure command:

```
./configure --enable-jit --prefix=/opt/octave3.8 --with-curl-libdir=/home/rope/bin/octave/gnutls/bin/
--with-curl-includedir=/home/rope/bin/octave/gnutls/include/ --with-ftk-
prefix=/home/rope/bin/octave/ftk/ --with-ftk-exec-prefix=/home/rope/bin/octave/ftk/bin/
LLVM_CONFIG=/home/rope/bin/octave/llvm/bin/llvm-config
```

After this, make successfully completed after ~30-35 mins.

However, make check fails as there is something wrong with the ftk. Do you have any comments on how should I configure the build process?

Thanks in advance,  
rope

**Suananda** posted on March 29, 2014 at 22:20

Thanks, it works in linux Mint 16

**Muhammad Ibraheem** posted on April 4, 2014 at 08:52

thaaaaaaaaaaaaaaaaaaaaaaaaaaaaaankss

It was so easy to me .... with out any mistakes ^\_^

**Robert Kopp** posted on April 10, 2014 at 18:00

On my system, all went well, through "make check" But upon invoking \$ octave3.8, the system responded with "command not found." The directory in /opt does not exist, although the symbolic link was created to /usr/local/bin.

What can I do? I am willing to remove 3.6 and/or install 3.8 in the standard search path, if that's what it takes.

**Miguel** posted on April 16, 2014 at 12:47

Great!! I run octave in Linux Mint 15 Olivia using UBUNTU 13.10 instructions. Thanks

**Paulie** posted on May 4, 2014 at 18:57

Thanks Michael, for taking the time to create this article, plus your instructions to build and install octave were easy to carry-out. Running it on Ubuntu 13.10.

**Ed** posted on May 19, 2014 at 11:57

Excellent! I initially had the same problem as Robert Kopp encountered. So I basically started over by first completely removing Octave 3.6 and qt octave.

It took 2-3 more hours on a single-core laptop but eventually v3.8 is now working.

I have Mint 13.04 so I used your 13.10 instructions. However, to get things from PPA: they only have 12.04 and 13.10 so I didn't know which one I could use and couldn't exploit that easy way.

**rastaxe** posted on June 23, 2014 at 05:44

I got this problem during make:  
could not find a Qt installation of ""

I solved installing also this package:  
sudo apt-get install qt5-default

**Burford Furman** posted on November 22, 2014 at 00:09

I just built Octave 3.8.2 under Debian ver 7 (Wheezy), and when I try to run Octave from the command line in an XTerm with `./run-octave --force-gui`

I get:

```
octave: no graphical display found
octave: disabling GUI features
GNU Octave, version 3.8.2
```

What must be done to get the GUI to work? Thank you.

---

## One Trackback

By [Octave 3.8 GUI | xiao wang's blog](#) on March 25, 2014 at 01:08

[...] <http://blogs.bu.edu/mhirsch/2013/12/compiling-octave-3-8/> [...]

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