

ITPP / IT++

1) IT++ is a powerful and beginner-friendly library for making Octave-like introduction to C++ efficient algorithm implementation. To sum up: IT++ library is a vast set of programs of proper algorithms in simplified C++ syntax.

2) official site: <http://itpp.sourceforge.net/4.3.1/>

3) additional packages install:

Documentation generator:

```
#sudo aptitude install doxygen
```

Makefile generator:

```
#sudo aptitude install cmake
```

Fortran compiler:

```
#sudo aptitude install gfortran
```

BLAS, LAPACK, FFTW:

```
#sudo aptitude install libblas3 libblas-dev liblapack3 liblapack-dev libfftw3-dev
```

4) download ITPP from “<https://sourceforge.net/projects/itpp/files/latest/download?source=files>”, and extract it

```
#mkdir build
```

```
#cd build
```

```
#sudo su
```

```
#cmake .. -Wno-dev
```

```
#make -j`nproc` > log.txt; grep -rnw ‘*ailed*’ log.txt
```

(optional) at new konsole tab view current operation: `#tail -f log.txt`

```
#make install
```

5) check whether it is working basicly. Paste tutorial from:

“http://itpp.sourceforge.net/4.3.1/vector_and_matrix.html”, compile and run it:

```
#cd .. && mkdir 00_example && cd 00_example/ && nano main.cpp
```

```
#touch a.out && rm a.out
```

```
# g++ -std=c++11 -mtune=native -march=native -Ofast -pipe main.cpp -litpp && ./a.out
```