Kalman Folding 9: in C (WORKING DRAFT)

Extracting Models from Data, One Observation at a Time

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<2016-05-17 Tue>

Contents

1 Literate Code

1.1 Step 1: Getting C to Work

First, make sure the following works[1] in org-babel and org-babel tangle. If it does work, you have a correctly installed C compiler.

```
int a=7;
int b=7;
printf("%d\n", a*b);
```

1.2 Step 2: Getting LAPACK to work

Get LAPACK.[2] This builds BLAS as a side effect.

```
pushd ~/Documents/lapack-3.6.0
cmake .
make
make test
```

```
pushd ~/Documents/lapack-3.6.0
make install
```

[1] Make sure the first example from `http://tinyurl.com/kz2lz7m` works

[2] `http://www.netlib.org/lapack/`

1.2.1 Make LAPACKE

This is the C interface to LAPACK. The following mercilessly hacks around a couple of problems in the build of `examples`, but it's enough to get the example working.

```
pushd ~/Documents/lapack-3.6.0
cp make.inc.example make.inc
cd LAPACKE
make lapacke
```

```
pushd ~/Documents/lapack-3.6.0
find . -name "*.a"
```

```
pushd ~/Documents/lapack-3.6.0
cd LAPACKE
cp ./include/lapacke*.h /usr/local/include
cd example
cp ../../liblapacke.a /usr/local/lib
cp ../../lib/*.a ../..
cp ../../libblas.a ../../librefblas.a
make
```

Emacs 24.5.1 (Org mode 8.3.4)