Max + openCV + Kinect

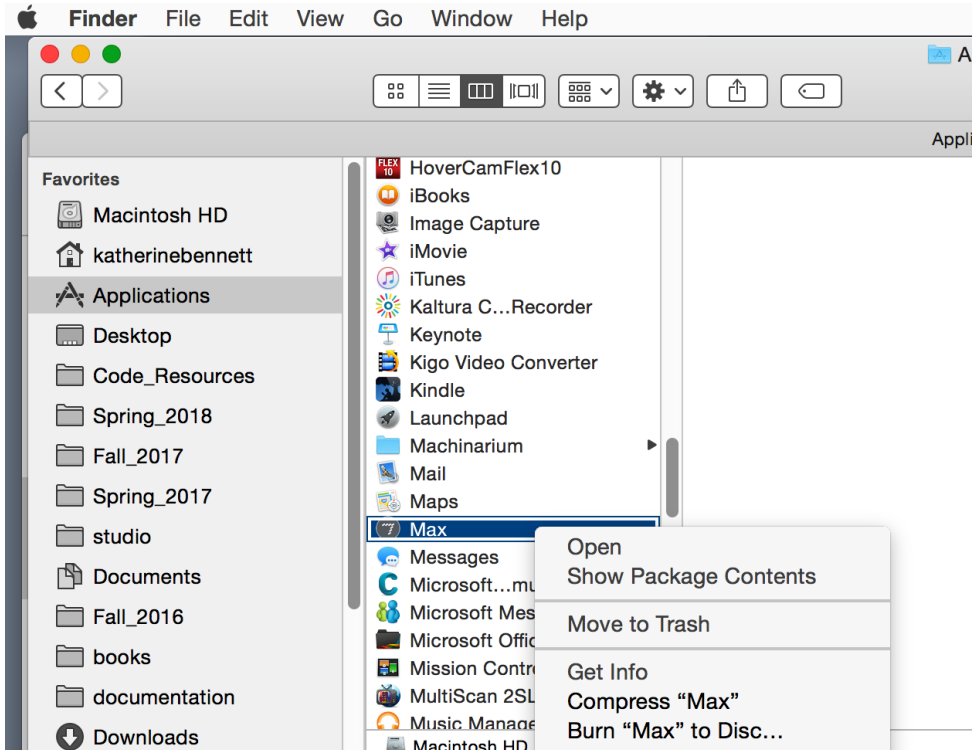
installation links + getting started

Basic Computer Vision with Max:

- download the cv.jit library by Jean-Marc Pelletier

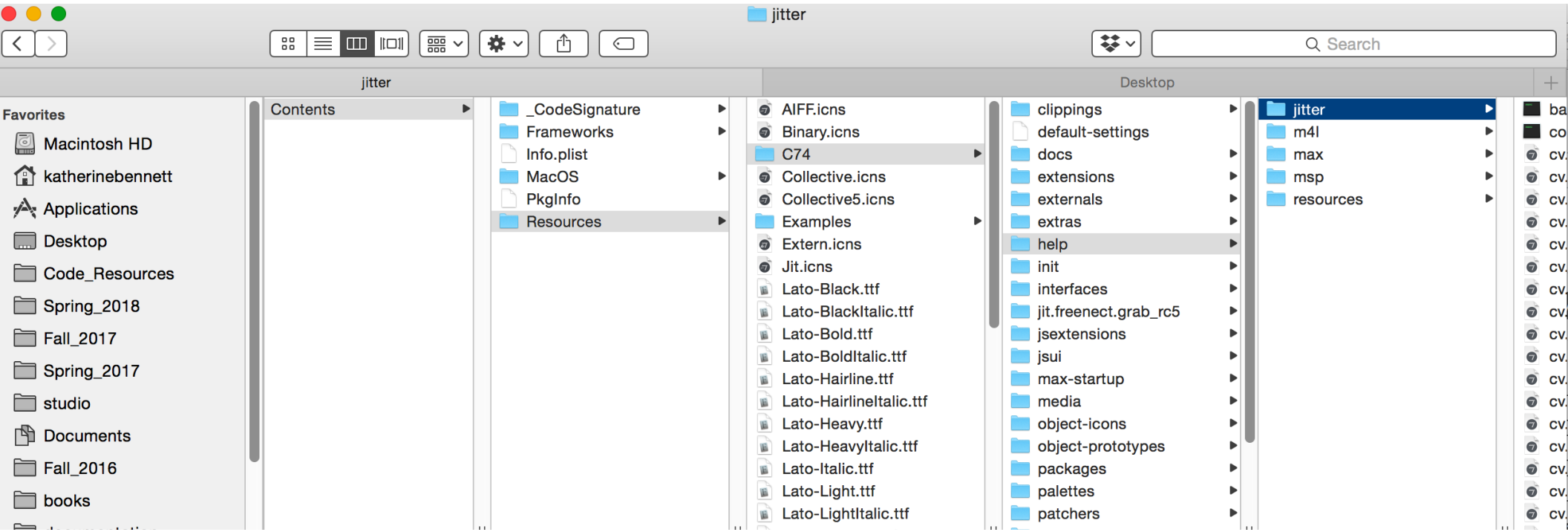
Basic Computer Vision with Max:

- unzip the file
- on the Max application from windows explorer or the finder, right click to “show package contents”



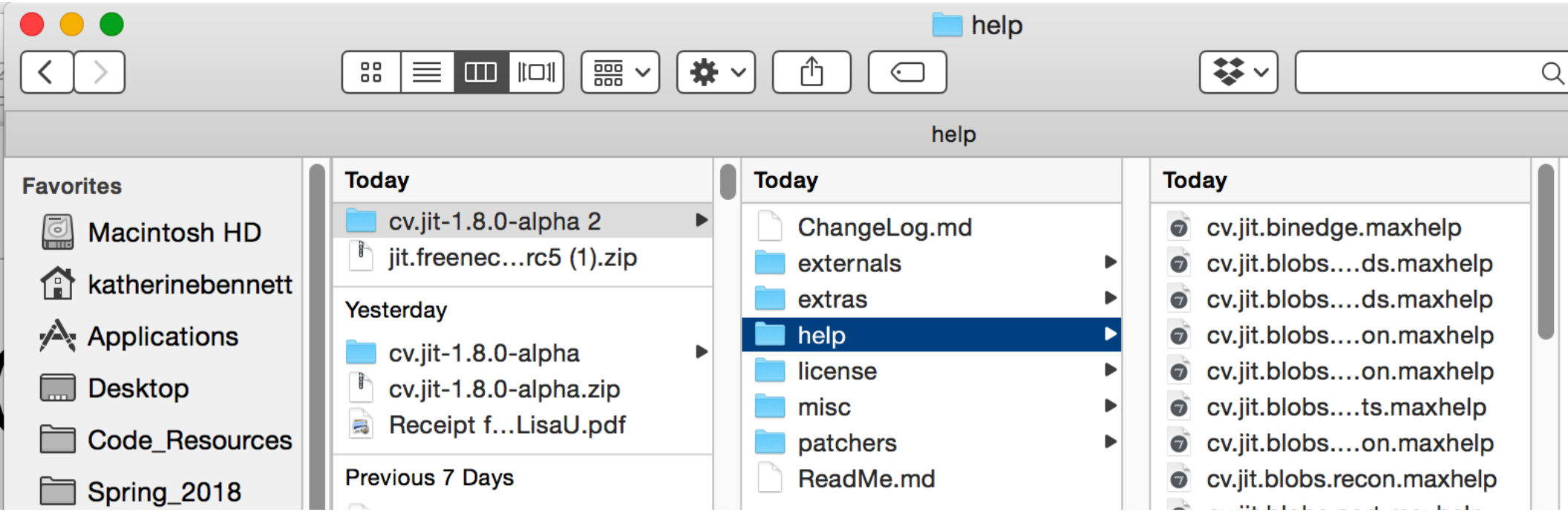
Basic Computer Vision with Max:

- find the “C74” file….
- In the help file, there should be a file for jitter.



Basic Computer Vision with Max:

- take all the help files from the downloaded unzipped folder….
- and place it WITHIN the jitter file from the C74/help

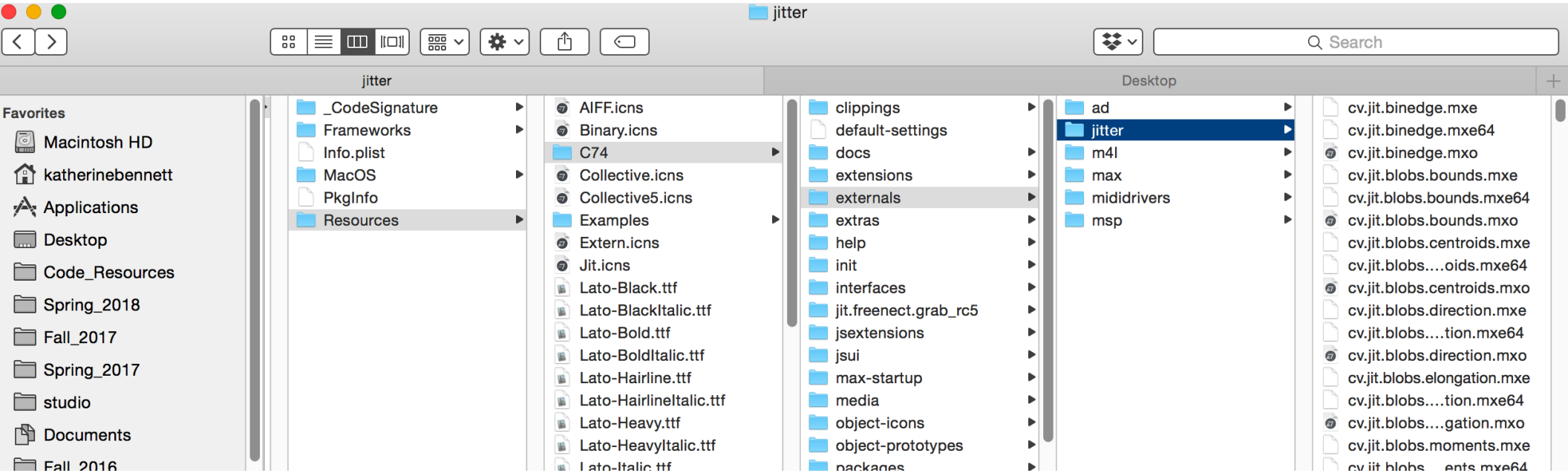


Basic Computer Vision with Max:

- We are going to repeat this process, taking files from the zip and putting them within the application file

Basic Computer Vision with Max:

- take all the Externals files from the downloaded unzipped folder
- and place it within the jitter externals from the C74/ externals/jitter

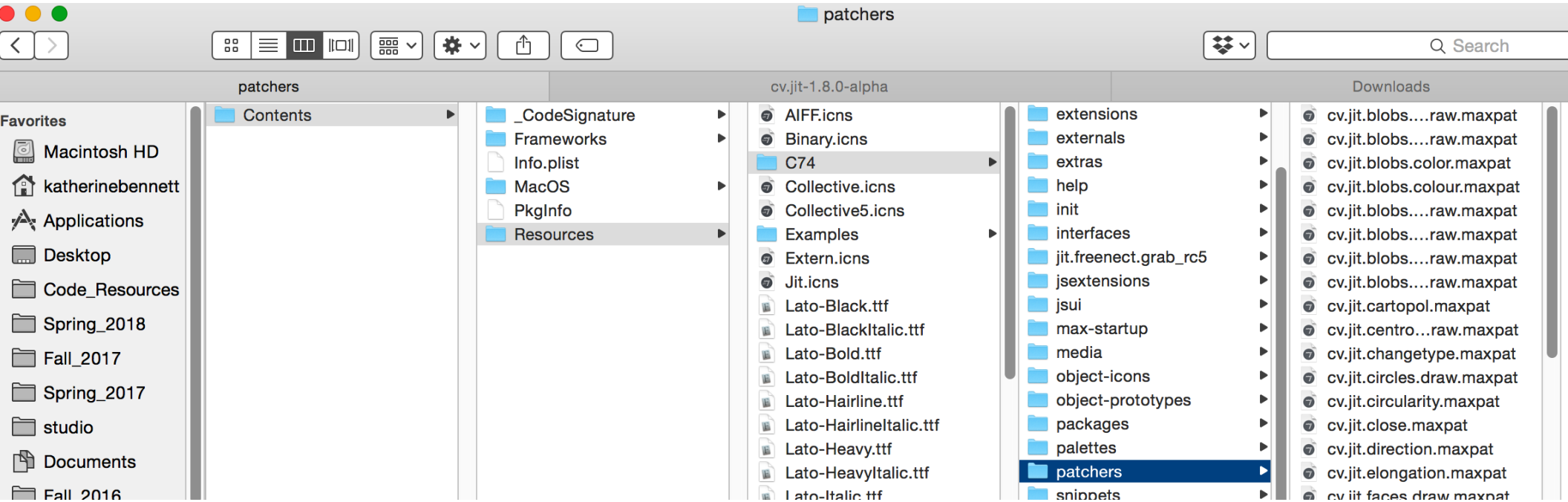


Basic Computer Vision with Max:

- take all the extras files from the downloaded unzipped folder
- and place it within the C74/extras

Basic Computer Vision with Max:

- take all the Patches files from the downloaded unzipped folder
- and place it within the jitter patches from the C74/ patches



Restart Max

Open a demo patch to see if the cv.jit objects load

You can use the kinect to detect in the dark:

- position of the body: skeletal tracking, elbows, where the right foot is, etc
- How far apart one's hands are
- anything else you've done in openCV, but in the dark

High Level Pipe line:

Kinect -> OpenCV -> your patch

What type of tracking are you requiring?

Skeletal

waving, joints, etc

- Processing 2.2.1 (old version)
- Processing library: OpenNI
- Processing Library: OSC
- Processing Library: netP5

Processing + Max

Presence, movement

blob tracking, frame difference, ++

- jit.freenect.grab (max external objec)
- libfreenect (openKinect library) - crazy install process

Max alone

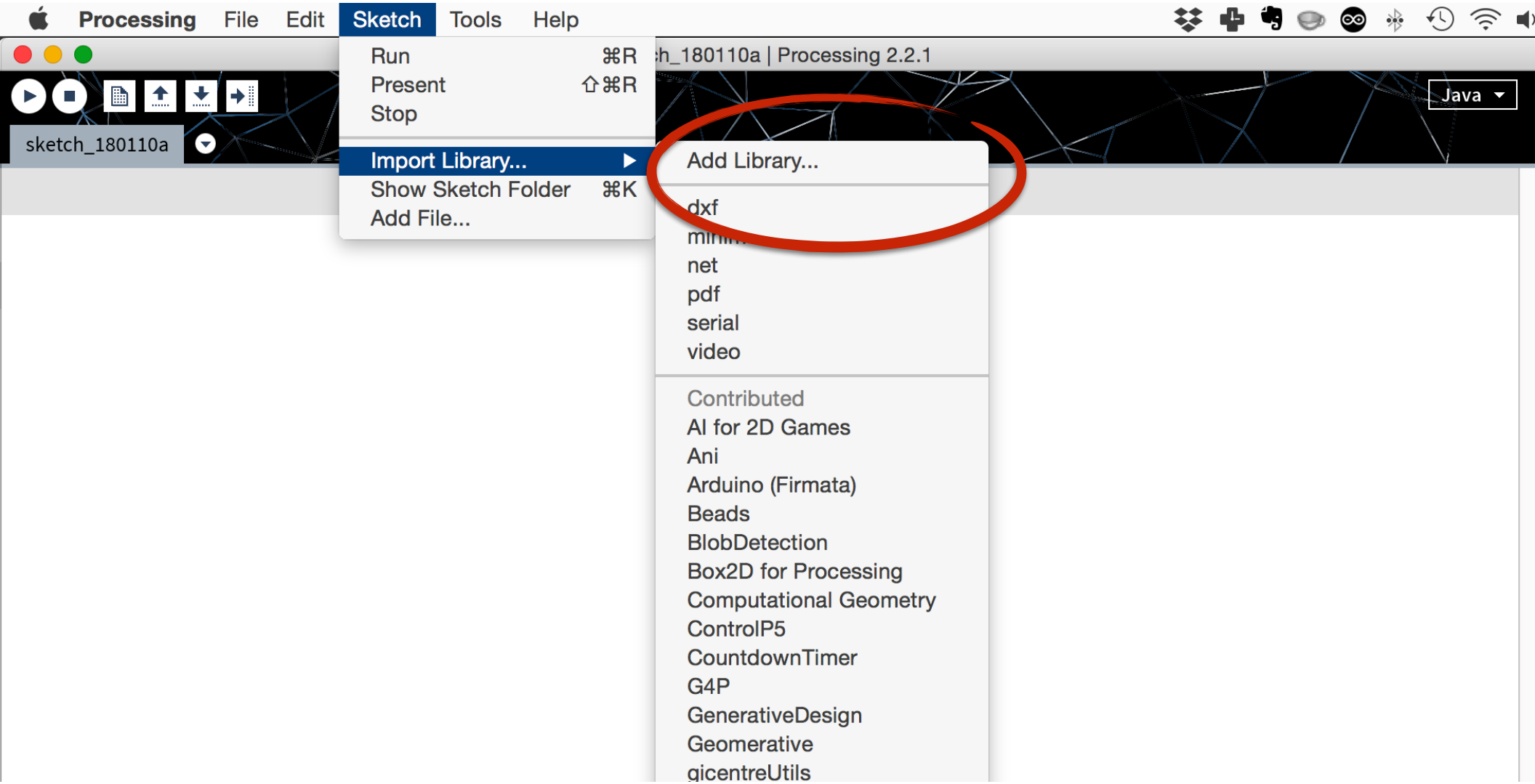
Skeletal Tracking Software installation steps:

To use skeletal tracking with the Kinect with Max, we are going to use an older version of Processing as the intermediary

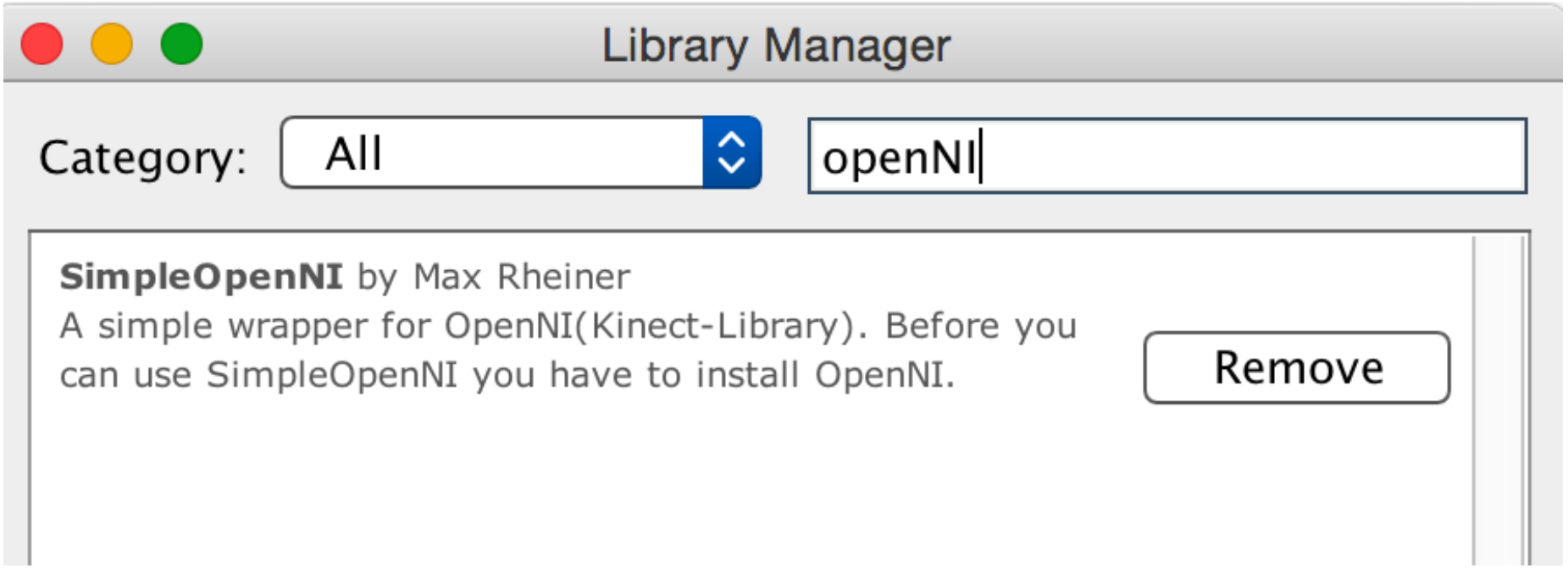
- Download Processing 2.2. It's an older version of Processing that works with the openNI library for the Kinect v1 model:1414

It must be Processing 2.2!

After installing Processing, Open it and go to:



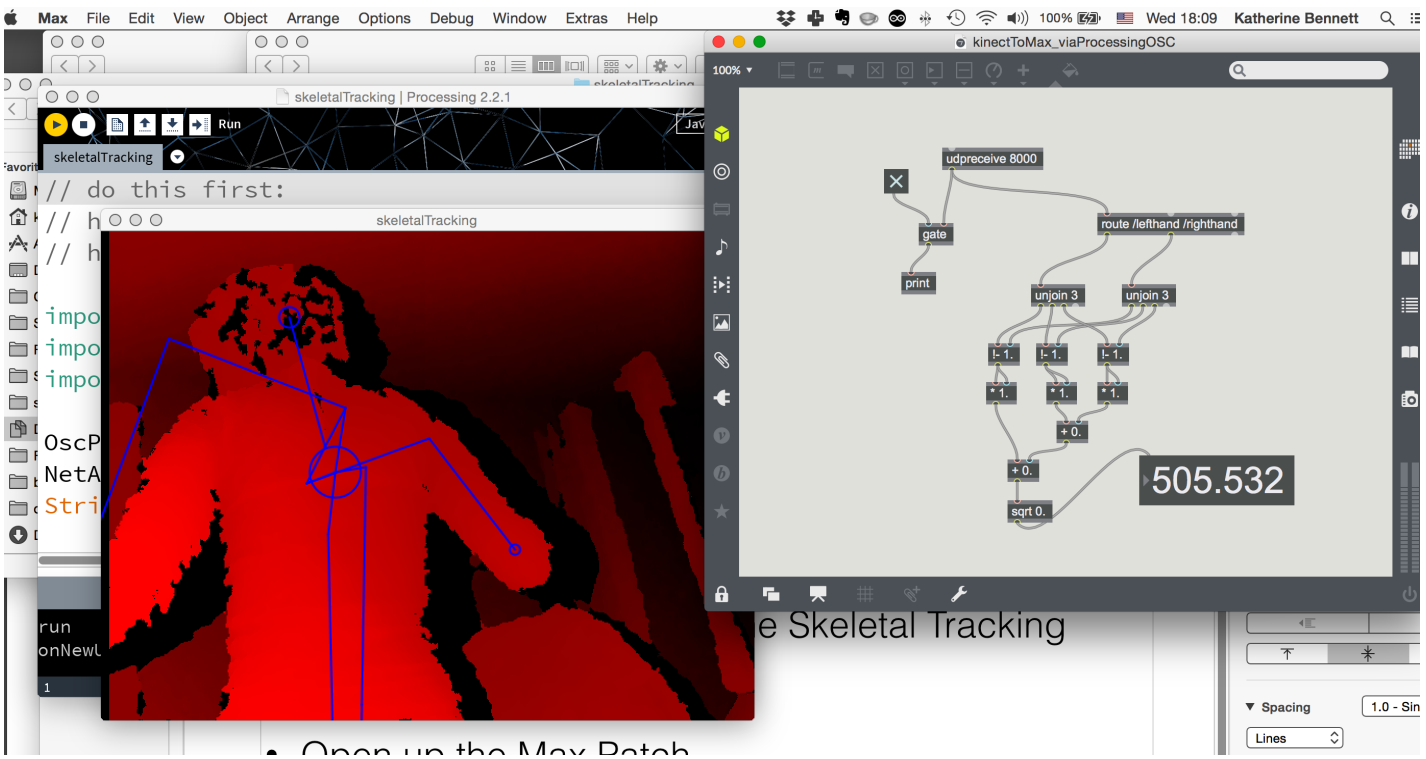
In Processing, install the SimpleOpenNI library for Processing



In Processing also install

- oscP5
- netP5

Install this the same way, through Processing's Library Manager

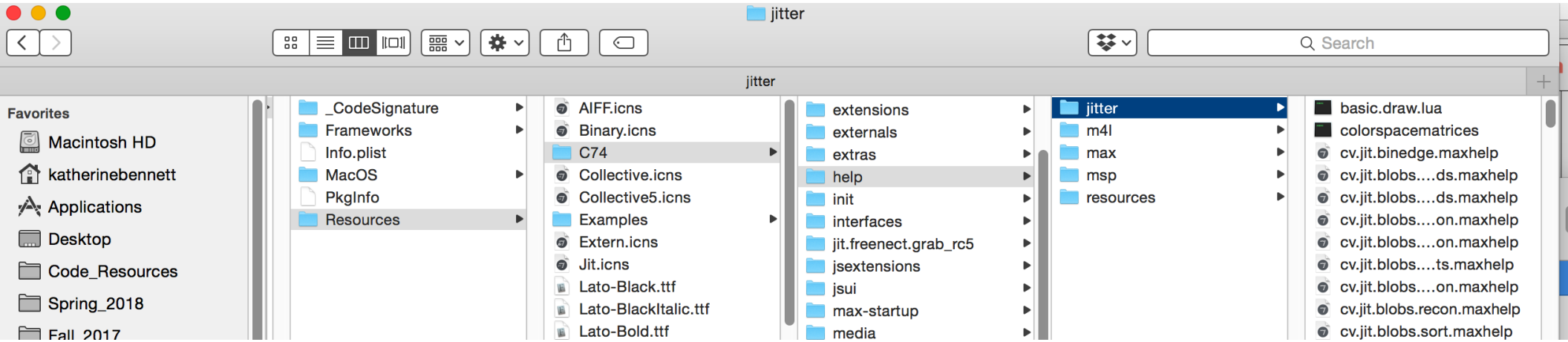


- Close Processing
- Re-Open Processing and the Skeletal Tracking Sketch
- Open up the Max Patch - KinectToMax_via_ProcessingOSC
- Stand in front of the Kinect and wave around a bit. You should see a blue skeletal body within yours, and the big integer box in Max churning out some numerical values

To utilize the other features of openCV using the kinect, we need to download a different library to support the kinect and some external max objects

download Jean-Marc Pelletier's jit.freenect.grab

- download jit.freenect.grab
- put the jit.freenect.grab.mxo object in the C74/externals/jitter as done here
- put the jit.freenect.grab.maxhelp object in the C74/help/Jitter file



Download the freenect library and follow the instructions to install for your operating system

- freenect library
- FOLLOW THE INSTALLATION INSTRUCTIONS FOR YOUR OPERATING SYSTEM CLOSELY

Restart Max

- With the Kinect already plugged in, restart max
- open the blob tracking example

Issues?

- Google is your friend. Copy and past errors into google
- Look at the forums for the particular software and libraries you are using
- You are not the first one to have issues! So, there's a high likelihood that someone else has had your issue and posted it.