ALICE instructions

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1   Install Homebrew and Dependencies

First, we download Homebrew by executing the following code in the terminal:

```
$ /bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/
   Homebrew/install/HEAD/install.sh)"
```

Next, we download boost, a library of useful c++ programs.

```
$ brew install boost
$ export LDFLAGS="-L/usr/local/opt/icu4c/lib"
$ export CPPFLAGS="-I/usr/local/opt/icu4c/include"
```

2   Install Miniconda

You do not need to install Miniconda if you already have Anaconda on your computer. You can find out if you conda by executing

```
$ conda --version
```

and observing the response. If you have conda installed, you will see a response such as `conda 4.9.2`. Your conda version may be different.

If you do not already have Anaconda or Miniconda, navigate to https://docs.conda.io/en/latest/miniconda.html.

Here, click on `Miniconda3 MacOSX 64-bit pkg` for `Python 3.8` under the `MacOSX installers` heading.

Follow the install instructions. You may have to select `install for me only` on the `Destination Select` step, as shown below.
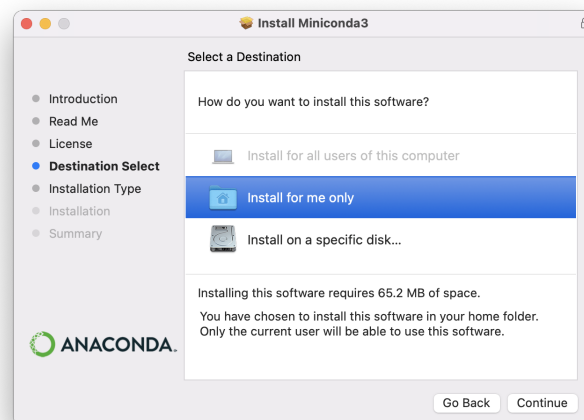

Figure 1: Configuration for Installing Miniconda

3   Download ALICE source code

We will download a zip of the github repository for ALICE by clicking on the green code button on the top right-hand side of the screen and then navigating to `download zip`.

Figure 2: Code Button

Next, open up a terminal window and execute the following instructions.

```
$ cd ~/Documents/
$ unzip ~/Downloads/alice-Version-1.3.zip
$ cd alice-Version-1.3
```

4   Configure conda environment

Next, we will create a new conda virtual environment called `alice-env`.

```
$ conda create --no-default-packages -n alice-env python=3.7 numpy
```

It's best practice to install all packages we want with the `create` command, but we will be download some dependencies individually.

First, activate your conda environment

```
$ conda activate alice-env
```

Then execute the following commands to install dependencies:

```
$ conda activate alice-env
$ conda install -c conda-forge libsmu
$ conda install cython
```

Next, we want to check that all dependencies are installed correctly. To do so, we start a python terminal:

```
$ python
>>> import numpy
>>> import tkinter
>>> import psymu
>>> exit()
```

If no errors are thrown, then all dependencies are installed correctly. Now, plug in your ADALM1000. We can check that the computer recognizes it by running

```
$ smu -l
```

If the ADALM1000 is detected, then you should see the following response:

```
ADALM1000:  serial 2031205050485230313330333130323 :  fw 2.17 :  hw F
```

5   Launch ALICE

Finally, we can start ALICE. Launch ALICE from the command line using

```
$ python alice-desktop-1.3.pyw
```