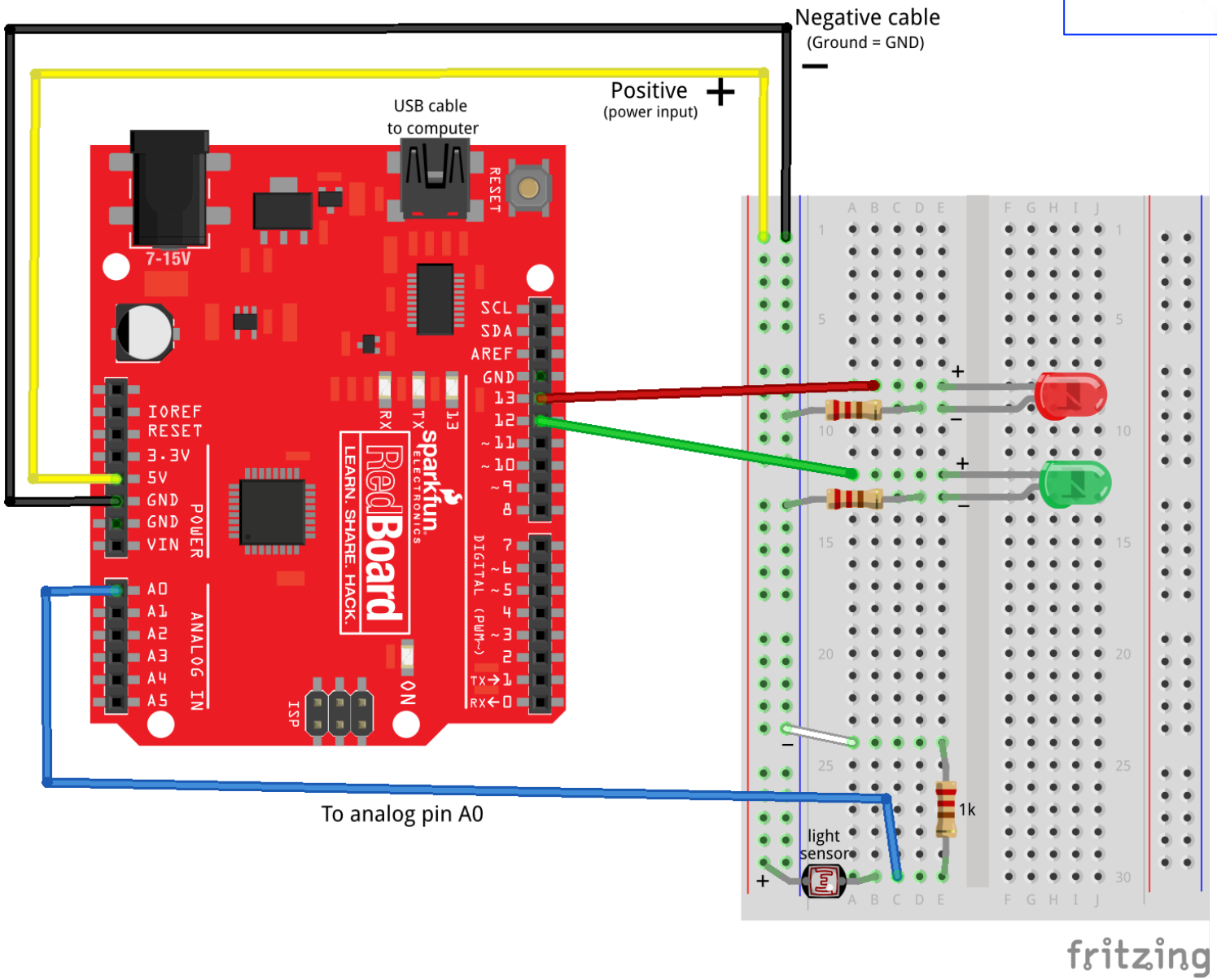
LED + light sensor circuit: Controlled blink program



PLOTTING THE SENSOR SIGNAL
using MATPLOTLIB

Open the program

LEDsLightSensor-matplotlib.ipynb

available at

https://github.com/sccc-python-workshop/python-examples

Execute the python code (shift+enter).

PLOTTING THE SENSOR SIGNAL
using PLOTLY

Open the program

LEDsLightSensor_plotly.ipynb

available at

https://github.com/sccc-python-workshop/python-examples

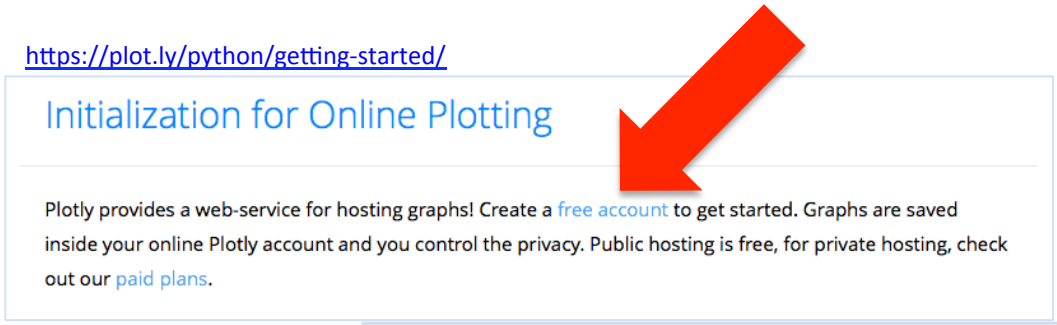
Before we can execute this code, there are a few things you must do online beforehand.

PLOTTING THE SENSOR SIGNAL using PLOTLY

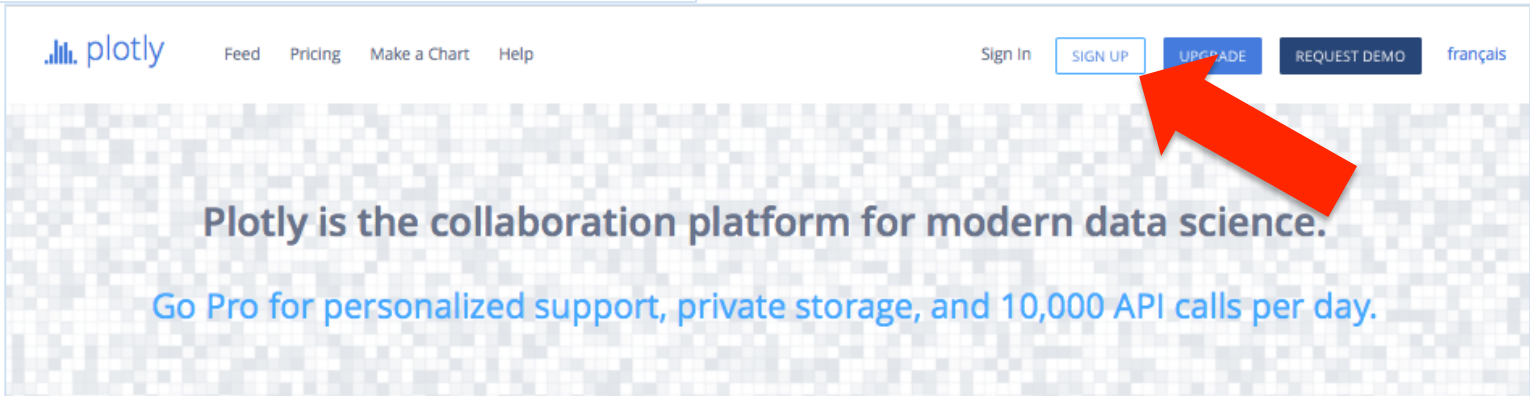
Sign up (i.e., open a free account) at
https://plot.ly/python/getting-started/

a. Read the installation instructions for **plotly**
b. Register (free) to be able to use the online plotting feature of **plotly**

https://plot.ly/python/getting-started/



Or go straight to https://plot.ly/feed/

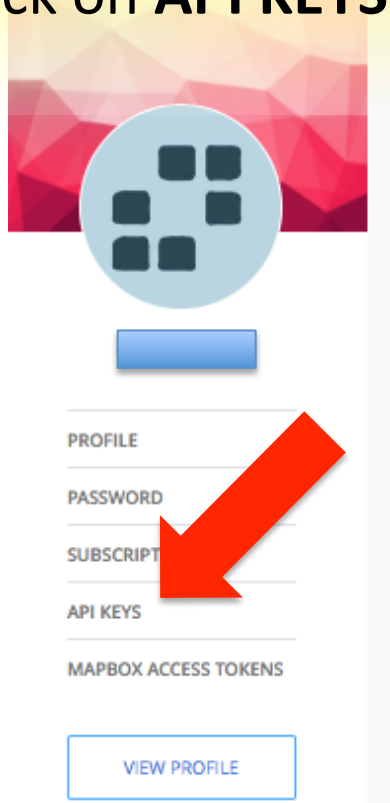


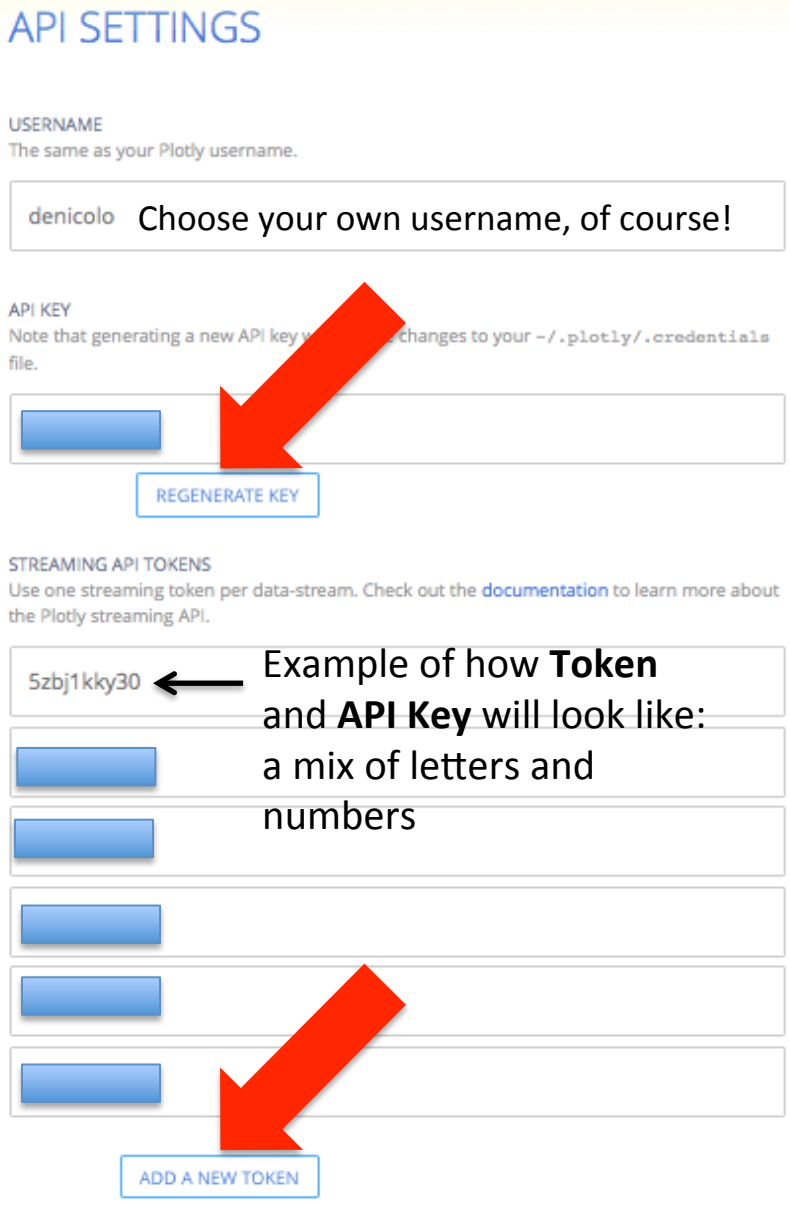
Once you sign in, click on **API KEYS** (menu on the left, under your profile name)

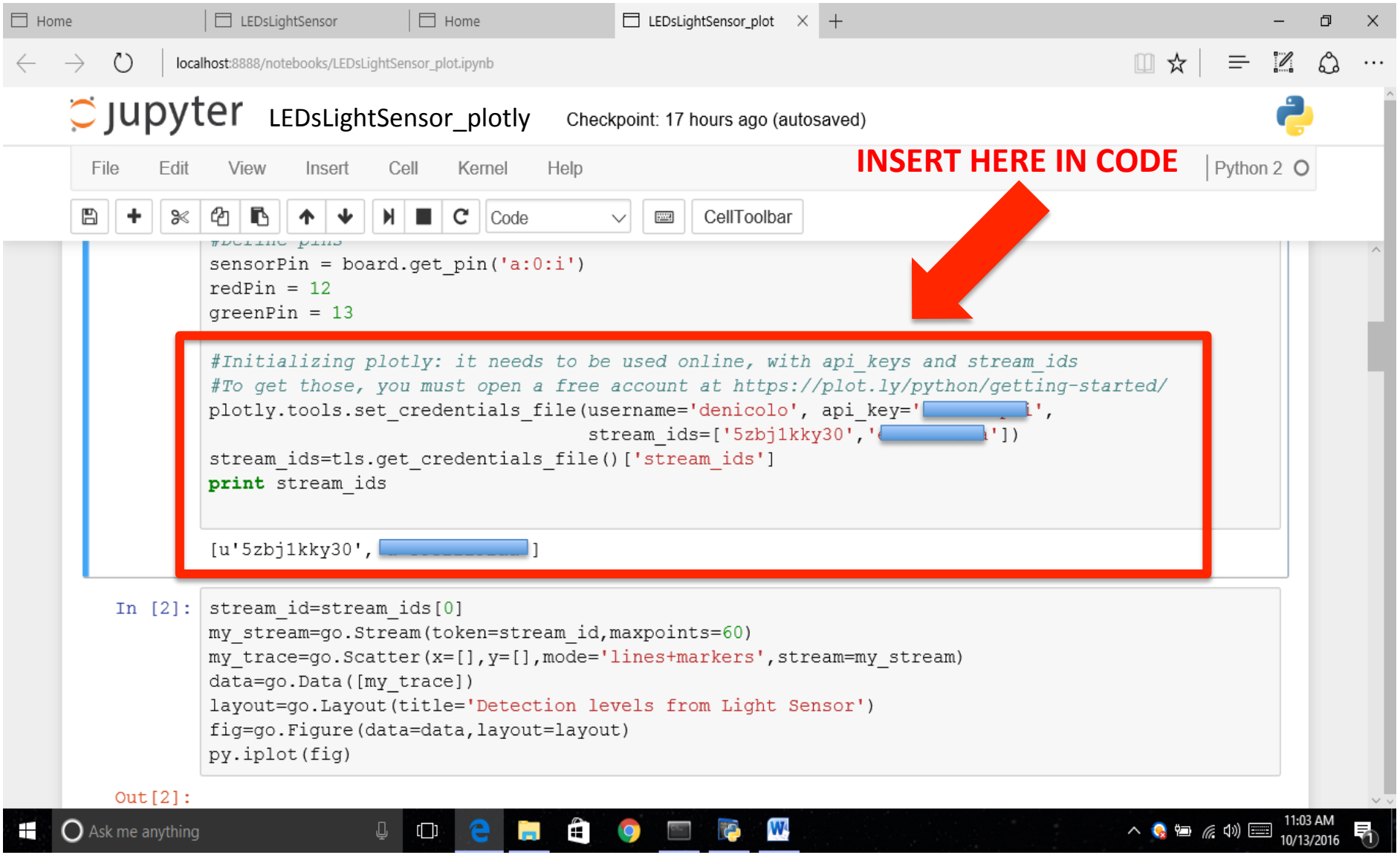
Generate an API KEY if you have none (there's a button for that). Write that down on a piece of paper.

Add two tokens (two is enough for this workshop) by clicking on the button "Add a new token". Write these down on a piece of paper.

Insert both API KEY and TOKENS in the Python code **LEDsLightSensor_plotly.ipynb**






Home
LEDsLightSensor
Home
LEDsLightSensor_plot
localhost:8888/notebooks/LEDsLightSensor_plot.ipynb
jupyter
LEDsLightSensor_plotly
Checkpoint: 17 hours ago (autosaved)
File Edit View Insert Cell Kernel Help
Python 2
Code
CellToolbar
INSERT HERE IN CODE
sensorPin = board.get_pin('a:0:i')
redPin = 12
greenPin = 13
#Initializing plotly: it needs to be used online, with api_keys and stream_ids
#To get those, you must open a free account at https://plot.ly/python/getting-started/
plotly.tools.set_credentials_file(username='denicolo', api_key='
stream_ids=['5zbj1kky30','
'])
stream_ids=tls.get_credentials_file()['stream_ids']
print stream_ids
[u'5zbj1kky30',
]
In [2]:
stream_id=stream_ids[0]
my_stream=go.Stream(token=stream_id,maxpoints=60)
my_trace=go.Scatter(x=[],y=[],mode='lines+markers',stream=my_stream)
data=go.Data([my_trace])
layout=go.Layout(title='Detection levels from Light Sensor')
fig=go.Figure(data=data,layout=layout)
py.iplot(fig)
Out[2]:
Ask me anything
11:03 AM
10/13/2016

If your **jupyter notebook** is open, close it by clicking on the command prompt window and typing CTRL-C. This should close & kill the notebook.

```
Next, write the following in the
command line prompt of your computer
(the same place you type “jupyter
notebook” to open the notebook).


pip install plotly
```

Wait for the installation to be completed. Now you can open your notebook again by typing **jupyter notebook**.
Plotly will always work in your codes from now on.