# Log File

Since the sensors require different versions of python to work correctly, we will have to develop two types of log.py files that will run in parallel with each other at the start up of the Raspberry Pi (RPi).

## log\_2.py

This is the log file that runs the two Sensirion sensors (SPS30 and SCD30) with python2 – to be further developed by Hagen.

## Log\_3.py

This is the log file that runs the Adafruit sensors with python3 – to be developed by Pearl. The Adafruit sensors are:

* SGP30
* TSL
* RTC

The log file should import functions for each of the sensors listed above. Since the Adafruit sensors are simpler, the only two functions that need to be included (that I can think of) are:

* **createSensor():** creates an i2c object and returns it
* **takeMeasurement():** reads the value from the i2c object and returns the values

The log file should create instances of the sensors, and in an infinite loop, read in measurement values every so often (every 30 seconds should work) through the use of the libraries that we created, and write the output to a csv file that is stored locally (for now). The values that should be written to the output file are:

* SGP30
  + TVOC concentration
  + Equivalent carbon dioxide concentration
* TSL
  + Lux value
  + Visible level
  + Infrared level
* RTC
  + Time of measurement in UTC (ideally)

Each of the variables above should represent one column of data and the name of the file should be in the following format: log3\_yyyy-mm-dd\_hh:mm:ss. The datetime values in the format should be the datetime corresponding to the start of measurement.