POOL TEMPERATURE MANAGEMENT

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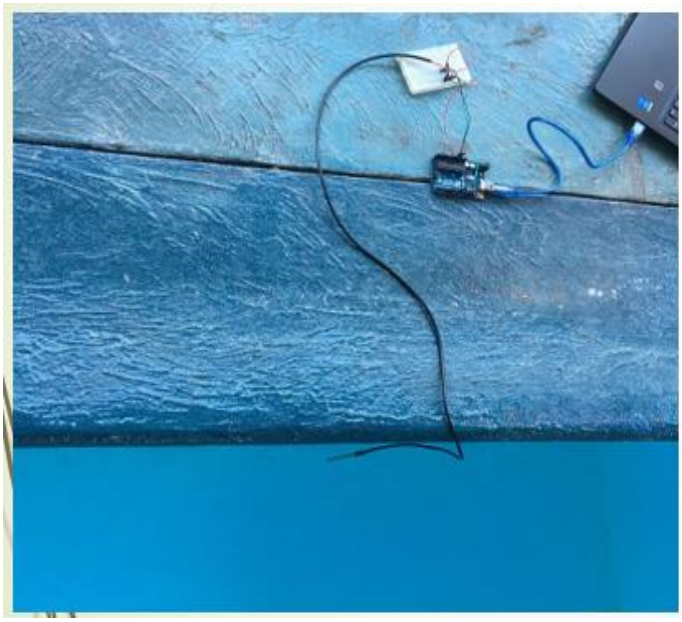
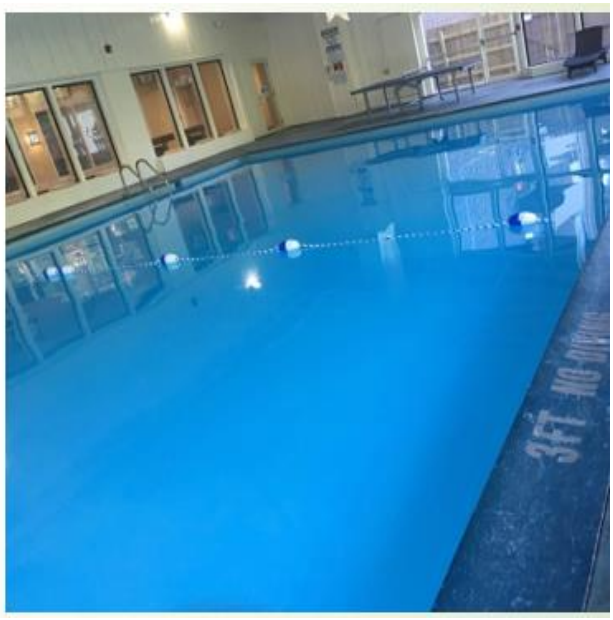
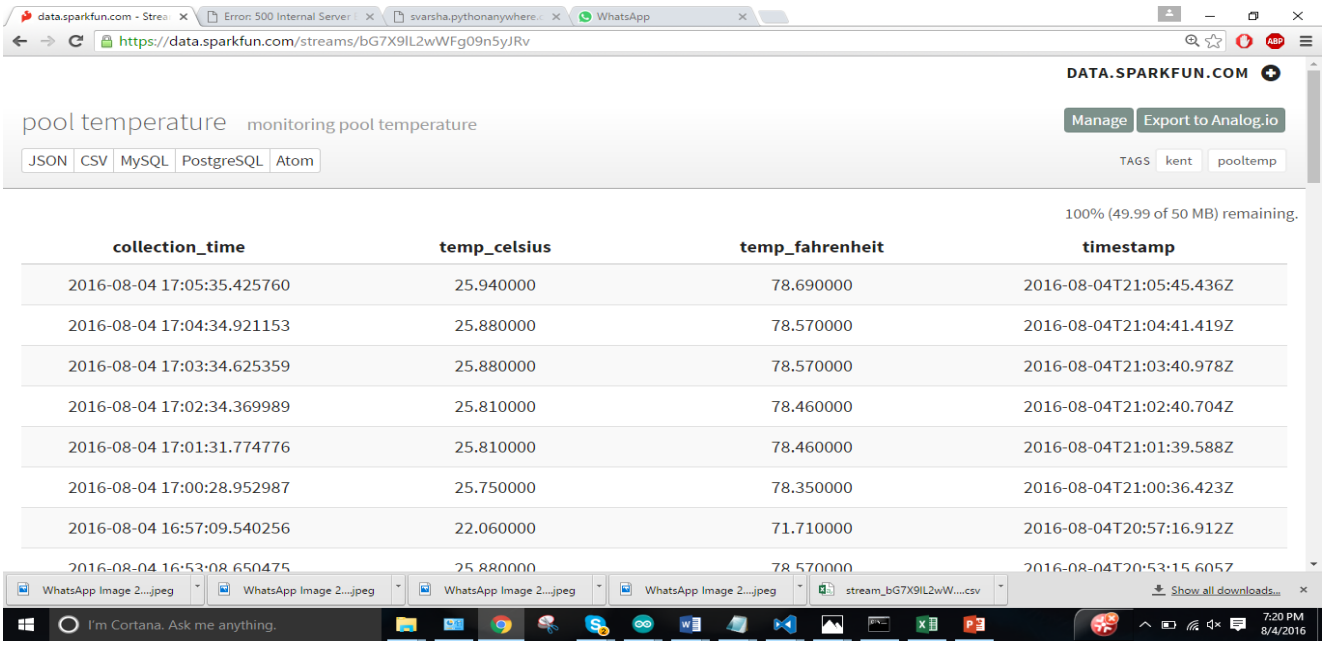
Introduction: Pool temperature Management system is mainly about monitoring the temperature in pool using one wire with aurdio sensor. This is where I placed my aurdio set in the pool.





Data Spark fun: Creating a stream that handles the data from the sensor



https://data.sparkfun.com/streams/bG7X9IL2wWFg09n5yJRv

DATA.SPARKFUN.COM

pool temperature monitoring pool temperature

Manage | Export to Analog.io

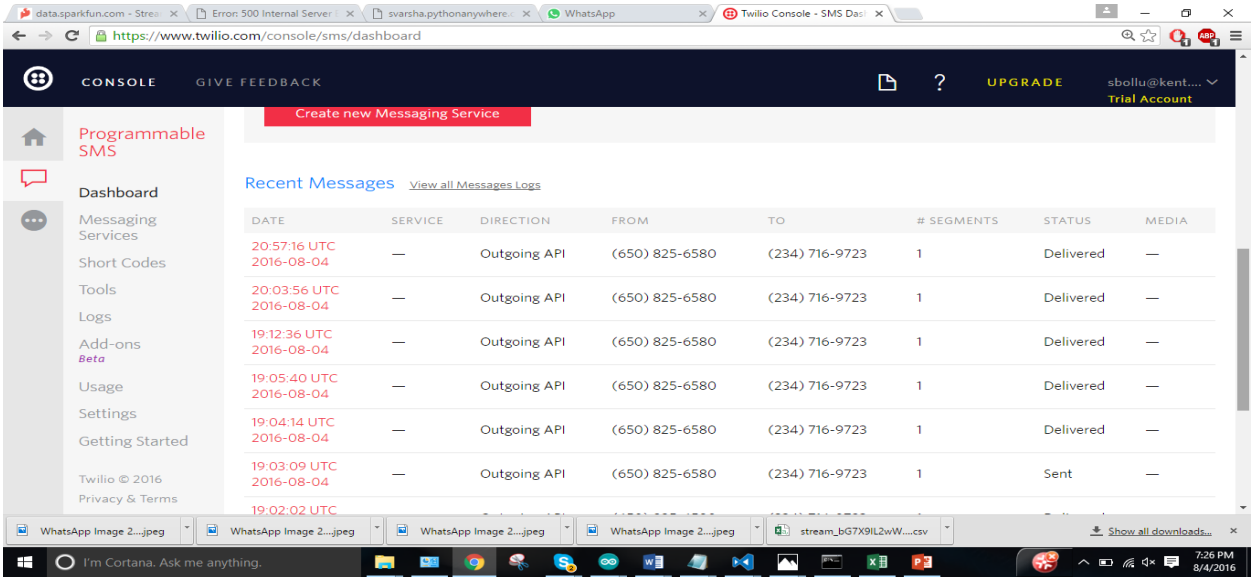
JSON | CSV | MySQL | PostgreSQL | Atom

TAGS kent pooltemp

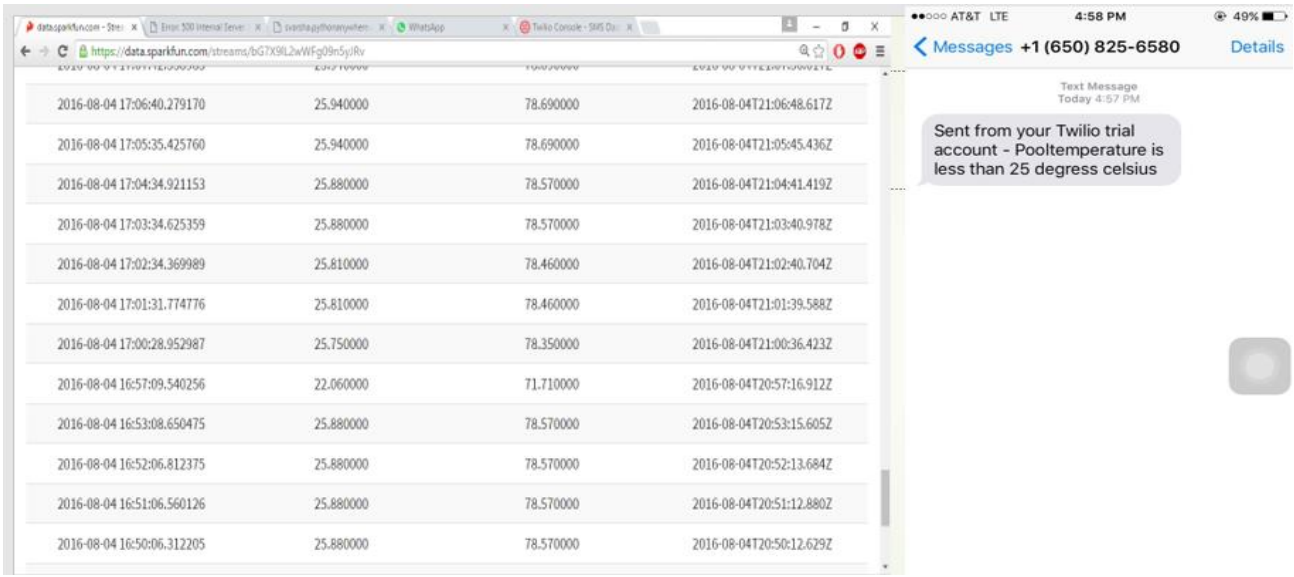
100% (49.99 of 50 MB) remaining.

collection_time	temp_celsius	temp_fahrenheit	timestamp
2016-08-04 17:05:35.425760	25.940000	78.690000	2016-08-04T21:05:45.436Z
2016-08-04 17:04:34.921153	25.880000	78.570000	2016-08-04T21:04:41.419Z
2016-08-04 17:03:34.625359	25.880000	78.570000	2016-08-04T21:03:40.978Z
2016-08-04 17:02:34.369989	25.810000	78.460000	2016-08-04T21:02:40.704Z
2016-08-04 17:01:31.774776	25.810000	78.460000	2016-08-04T21:01:39.588Z
2016-08-04 17:00:28.952987	25.750000	78.350000	2016-08-04T21:00:36.423Z
2016-08-04 16:57:09.540256	22.060000	71.710000	2016-08-04T20:57:16.912Z
2016-08-04 16:53:08.650475	25.880000	78.570000	2016-08-04T20:53:15.605Z

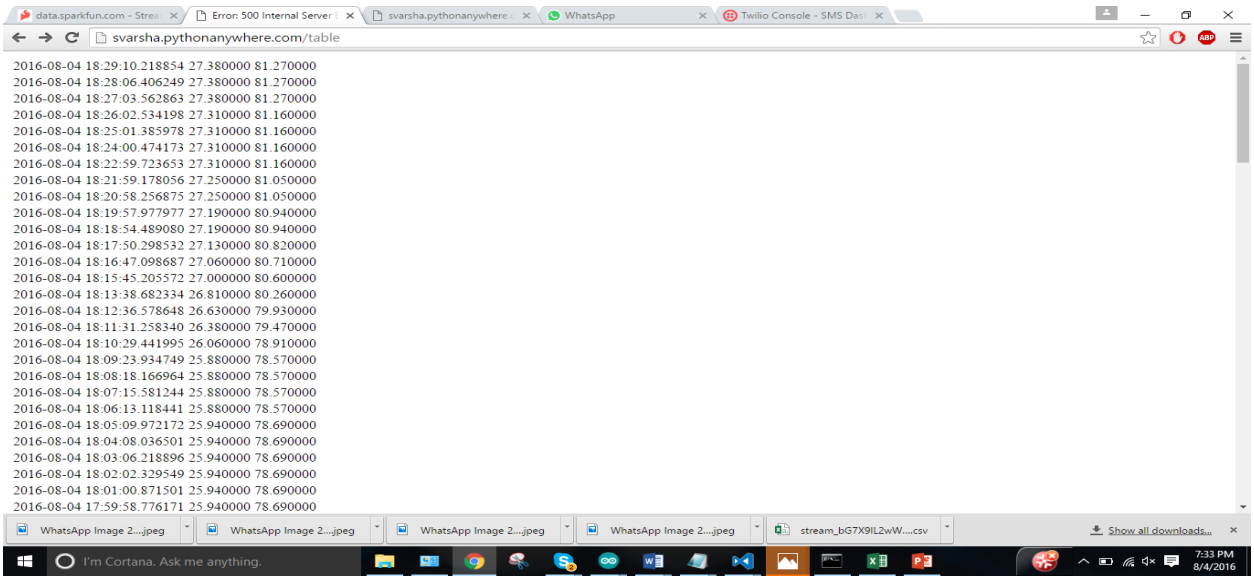
After getting the data into the stream, then we need to check the temperature range of the pool should be 25-28 Celsius. To know when your pool temperature is not in the range I used twilio a good python interactive console for SMS.



When the temperature is around 22 Celsius, which is not in the range of the pool temperature it is around 16:57 in collecting time, and SMS is sent to my phone at the same time (16:57) 4:57 pm.



Using pythonanywhere the stream data is displayed in table.



Using google charts: Temperature v/s timenode