**Sensor Fusion Algorithm**

Course: SYSC5709F

This program is designed to compute the temperature value by combining the input from multiple sensors provided at a given time of the day. Here, the sensors are providing individual temperature values for specific times, which can be processed by the sensor fusion algorithm to compute a single correct temperature value for distinct time values. The data is provided by the client in a .csv file, in which 3 parameters are specified, i.e., time, sensor name and temperature measured by the sensor at provided time

Dependencies: CGWIN, GSL, Windows/Linux Computer

How to run?

1. Install CYGWIN to the computer. (For windows computer only refer: <https://www.cygwin.com/> )
2. Install GSL Library (Reference: <https://www.gnu.org/software/gsl/> )
3. Clone the project in your computer, using cgwin run command “git clone <https://github.com/amuleengulati/SensorFusionAlgorithm>”
4. Change directory using “cd SensorFusionAlgorithm”
5. Run the command “make clean; make all”
6. This will generate 3 folders

* Bin – executable files
* Build – binary files
* Result – Folder for result

1. Relocate to bin directory “cd bin”
2. Run executable file “./main.exe”
3. It will generate output in results folder.

Files Organization:

Readme.md

makefile

User Doc.docx

Designer\_Doc [This folder contains the documentation generated using doxygen]

SensorFusion\_src [This folder contains the source code for the implementation]

include [This folder contains the header files for the source files]

data [This folder contains the input file which will be in csv format]

result [This folder will be generated automatically when then will be used]

build [This folder will be generated automatically when the program is compiled, and the object files will be stored in this folder]

bin [This folder will contain executables and it will be generated once above stated procedure is followed]

test [This folder includes the test cases for testing the software]

lib [This folder contains GSL library]

Standard Input file: input.csv



Standard Output file: output.txt