

A civil engineer was recording using a sensor the load on a horizontal rigid bar at different positions starting from $x = 0$ m (see figure). The text files contain the load in Newton (2nd column) for every 1mm displacement on the rigid bar, resulting in 1000 measurements recorded by the sensor. Write a C++ program that reads a text file and output the average load on a structure as well as the location of maximum load on the rigid bar.

