*Session 4: Assignment 1*

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1. Introduction

This assignment will help you to consolidate the concepts learnt in the session.

1. Problem Statement

**Problem Statement 1:**

You survey households in your area to find the average rent they are paying. Find the

standard deviation from the following data:

**$1550, $1700, $900, $850, $1000, $950.**

**Note: Solution submitted via github must contain all the detailed steps.**

**3. Output:**

Step 1: Find the [**MEAN**](http://www.statisticshowto.com/mean): ($1550 + $1700 + $900 + $850 + $1000 + $950)/6 = $1158.33

Step 2: **Subtract** the [MEAN](http://www.statisticshowto.com/mean) from each value. This gives you the differences:  
$1550 – $1158.33 = $391.67  
$1700 – $1158.33 = $541.67  
$900 – $1158.33 = -$258.33  
$850 – $1158.33 = -$308.33  
$1000 – $1158.33 = $158.33  
$950 – $1158.33 = $208.33

Step 3: **Square** the differences you found in Step 2:  
$391.672 = 153405.3889  
$541.672 = 293406.3889  
-$258.332 = 66734.3889  
-$308.332 = 95067.3889  
$158.332 = 25068.3889  
$208.332 = 43401.3889

Step 4: **Add** up all the squares you found in Step 3 and divide by 5 (which is 6 – 1):  
(153405.3889 + 293406.3889 + 66734.3889 + 95067.3889 + 25068.3889 + 43401.3889) / 5 = 135416.66668

Step 5: Find the **square root** of the number you found in Step 4 (the [**Variance**](http://www.statisticshowto.com/probability-and-statistics/variance/)):  
√135416.66668 = 367.99

The [**STANDARD**](http://www.statisticshowto.com/probability-and-statistics/standard-deviation/) **DEVIATION** is **367.99**