**Assignment 2**

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**Requirement:** This assignment is to provide an estimate of the melting point of the alloy Cerrolodium using calibrated measurements from a new sensor.

**Intuition:** Given the ground truth of the melting point of Fieldium and 10000 measurements it, I calculated the bias and the variance to calibrate the sensor, and then give the estimate of the melting point of Cerrolodium.

**Steps:** Calculate the bias using the given ground truth of the melting point of Fieldium and the uncalibrated measurements. Find the errors by subtracting each measurement from the ground truth. Add up all the errors and divide by the number of measurements to get the bias. The bias I got is -0.0124. Then add the bias to the single measurement of the melting point of Cerrolodium. The result is 20.3213 – 0.0124 = 20.3090.

Then I calculated the variance using the following equation:

σ2 = 2

The variance I got is 3.9654e-6

Thus, the final result should be 20.3090 ± 3.9654e-6.

**Screenshot of code:**

