



Department of Computer Science and Electrical Engineering

CMSC 491 – Introduction to Data Science Assignment 1

Due: 9/16/2018

Total Points - 25

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The assignment consists of two parts

First, the attached Excel file Exam_Score shows the points obtained by students in a test sorted by student number. Please do the following-

1. **Choose a specific BIN and calculate the frequency distribution and draw a histogram.**
2. **Calculate the following measures of location – mean, median, mode.**
3. **Calculate Variance and Standard Deviation (with and without using Excel functions).**
4. From the above data find out the probability that a student will obtain a grade 79.
5. **Estimate the number of students who would get points between 75 and 85.** Does it match with the actual data?

Second, the attached Excel file Sales_Data shows the number of customers who made a purchase in a store among the first 1000 people who visited the store.

Please do the following

*use the binomial distribution

1. **Using the data find out the probability that among 1000 customers there will be between 5 and 10 purchases in a day.**
2. Using the data find out the probability that among 1000 customers there will be exactly 7 purchases in a day.
3. Using the data find out the probability that among 1000 customers there will be at least 65 purchases in a day.
4. Is it possible to use Poisson distribution in this case? Explain.