1. Explain what you learned from the Python Lab that you completed for Week 3 (minimum of 50 words, worth 20 points).

One of the objectives I have learned was from the Poisson distribution- according to Hao Hu "In probability theory and statistics, the Poisson distribution is a discrete probability distribution that expresses the probability of a number of events occurring

in a fixed period if these events occur with a known average rate and independently of the time since the last event." it can be used to version the quantity of events that arise within a hard and fast interval of time or space. programs consist of modeling arrivals at a service center, rare disorder occurrences, or the range of calls at a call center at some point of a particular time.

After learning the coding for that we moved on to Normal distribution which is a probability distribution that appears as a "bell curve" when graphed, once we were able to accomplish that we moved on to Binomial distributions which I learned probability of the number of successes in a sequenced number of experiments.

1. Describe the value of understanding probability and distributions to add value to an organization (minimum of 100 words, worth 25 points).

Davidson, L.B. says "Uncertainty in present value can be computed relatively easily and quickly. To do so, all that is needed is an algebraic model of investment and a modest helping of statistics. The key to this approach is to focus on the parameters of the probability distributions involved. parameters of the distribution involved. Introduction" The practice of understanding probability and distributions can help in many areas that include improve decision making, scenario planning, Risk assessment and forecasting. By using Enhanced Risk Management, you are quantifying uncertainty and modeling complex systems and building contingency plans. This will allow for strategic planning and resource allocation in the event this information is required for. It can also be used to help improve business processes like inventory management or supply chain optimization. As you can see there is a wide range of uses adding value to an organization.

References:   
Hao Hu

Department of Physics and Astronomy,University of Tennessee at Knoxville,Knoxville, Tennessee, USA (Dated: October 20, 2008): https://sces.phys.utk.edu/~moreo/mm08/Haohu.pdf

Davidson, L.B., and D.O. Cooper. "A Simple Way of Developing a Probability Distribution of Present Value." J Pet Technol 28 (1976): 1069–1078. doi: https://doi.org/10.2118/5580-PA