# Geostatistics Notes

08/29/19

## Geostatistics

1. A branch of statistics that applies the theories of stochastic processes & statistical inference to geographic phenomena
   1. Stochastic

## Univariate Description

1. Cumulative Density Function (CDF)
2. Summary Statistics
   1. Measures of location (1st moment)
      1. Arithmetic Mean:
      2. Geometric Mean:
      3. Median:
   2. Measure of spread (2nd moment)
      1. Variance
      2. Standard Deviation
      3. Interquartile range (IQR)
   3. Standardizing to evaluate normality (transform data)
      1. Rank smallest to largest
      2. Determine cumulative frequency (%)
      3. Transform to Z-score
3. Test of Normality
   1. Shapiro-Wilkes Test
      1. Best for 0 < n < 50
      2. Ho: Data comes from a normal distribution
      3. H1: Data does not come from a normal distribution
      4. Reject:
         1. W < 0.9
         2. Prob < W
   2. Kolmogorov-Smirnov