2016 Employee Salary Analysis

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**Normality testing**

Normality testing use for identifying the data is normally distributed or not. Normally distribution means there is no right or left skewedness available in the data distribution.To do the correlational analysis normality testing is necessary. For checking the data is distributed normal manner or not, need to use the Anderson darling, Lilliefors, and Shapiro wiki test of normality testing.

**Statistical Hypothetical Testing**: **Normality tests for Samples ; Dataset : Salaries**

Significant level = 0.05 (5%)

Confidence level = 0.95 (95%)

Variable = annual\_base\_pay

(\*) Whether or not professor salaries are normally distributed?

H­0: Employee annual\_base\_pays are normally distributed

H­1: Employee annual\_base\_pays are not normally distributed

Anderson-Darling normality test

data: annual\_base\_pay

A = 0.24133, p-value = 0.7346

Decision: p-value= 0.7346 > α=0.05 => Accept H0 at 5% significant level

Lilliefors (Kolmogorov-Smirnov) normality test

data: annual\_base\_pay

D = 0.10167, p-value = 0.8924

Decision: p-value= 0.8924 > α=0.05 => Accept H0 at 5% significant level

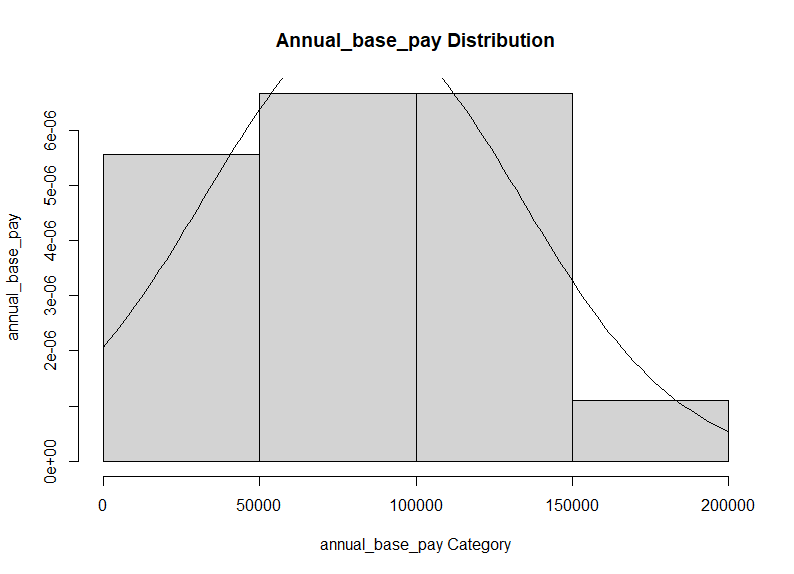
Shapiro-Wilk normality test

data: annual\_base\_pay

W = 0.96647, p-value = 0.7294

Decision: p-value= 0.7294 > α=0.05 => Accept H0 at 5% significant level

Conclusion - According to the Anderson darling (p = 0.7346), Lillefors (p = 0.8924), and Shapiro-Wilk testings at a 5% significant level data is normally distributed.



Interpretation of montacarlo graph

According to the above bell curve, data is distributed normally at 5% significant level.

**Statistical Hypothetical Testing**: **Normality tests for Samples ; Dataset : Salaries**

Significant level = 0.05 (5%)

Confidence level = 0.95 (95%)

Variable = location\_longitude

(\*) Whether or not employee salaries are normally distributed?

H­0: Employee location\_longitude are normally distributed

H­1: Employee location\_longitude are not normally distributed

Anderson-Darling normality test

data: location\_latitude

A = 1.7724, p-value = 9.585e-05

Decision: p-value= 9.585e-05 < α=0.05 => Reject H0 at 5% significant level

Lilliefors (Kolmogorov-Smirnov) normality test

data: location\_latitude

D = 0.26331, p-value = 0.001824

Decision: p-value= 0.001824 < α=0.05 => Reject H0 at 5% significant level

Shapiro-Wilk normality test

data: location\_latitude

W = 0.80257, p-value = 0.001652

Decision: p-value = 0.001652 < α=0.05 => Reject H0 at 5% significant level

Conclusion - According to the Anderson darling ( p = 9.585e-05), Lillefor (p = 0.001824), and shapiro wiki (p =0.001652) tests data is not normally distributed at a 5 % significant level.