Data Analytics Tools & Technique

Statistical Analysis

DA 6223

The University of Texas at San Antonio

Exploring Data with Tasks

- Business Scenario (Compare Means)

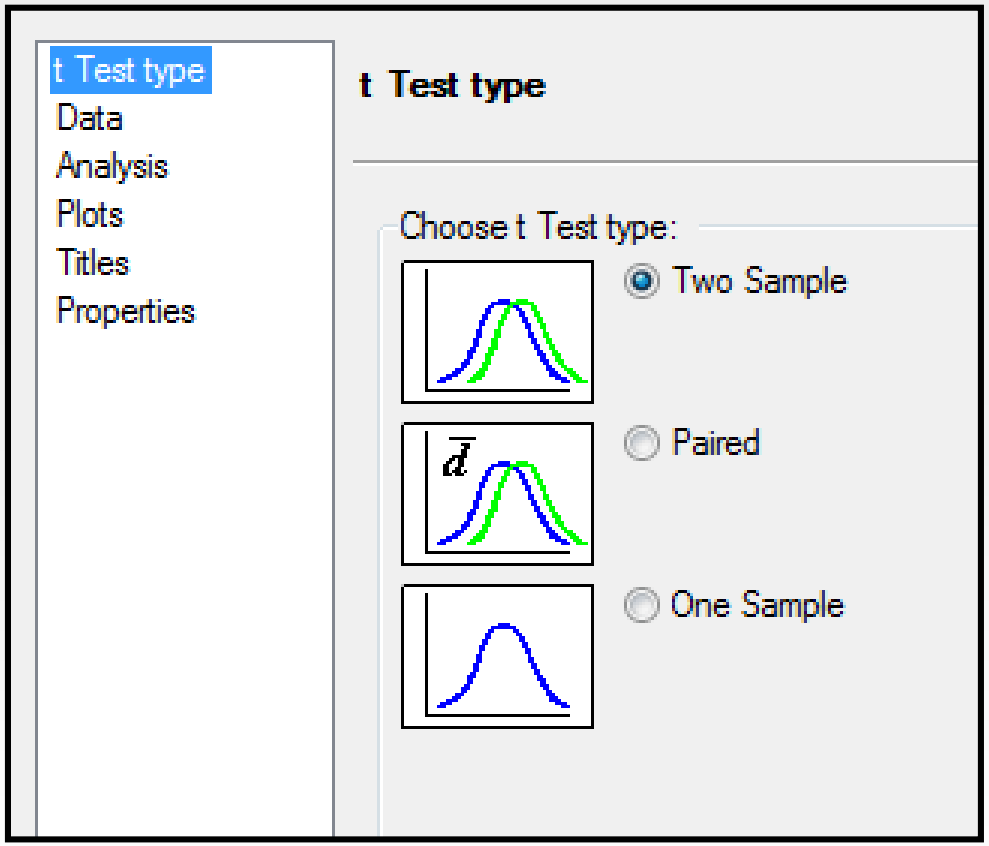
  The Human Resources department is involved in a situation that requires them to determine if the mean salary is different between men and women.

Exploring Data with Tasks

- t-Test

  A two sample t-test is used to determine whether the means of two populations are equal. The test assumes that the data are normally distributed for the t-test to be valid.

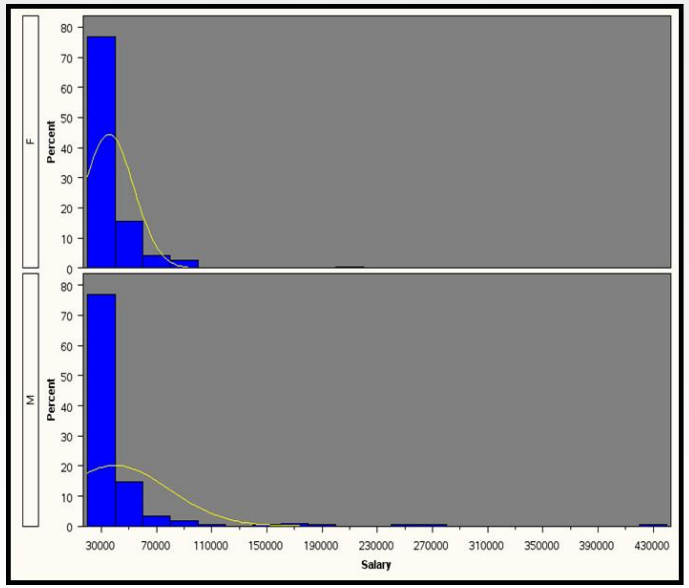
  This analysis tests whether the mean salary for women is different from the mean salary of men.

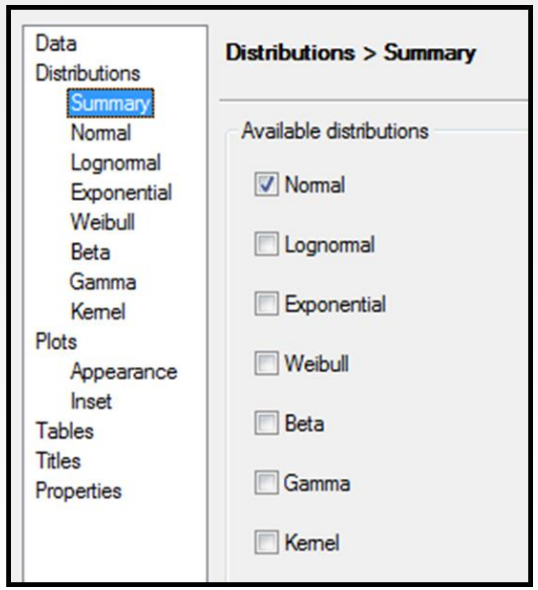


Exploring Data with Tasks

- Test the distribution

  The resulting distribution plot from the t-test (at left) shows that the data are not normally distributed. Run the distribution analysis task (at right) to test for normality of the data.

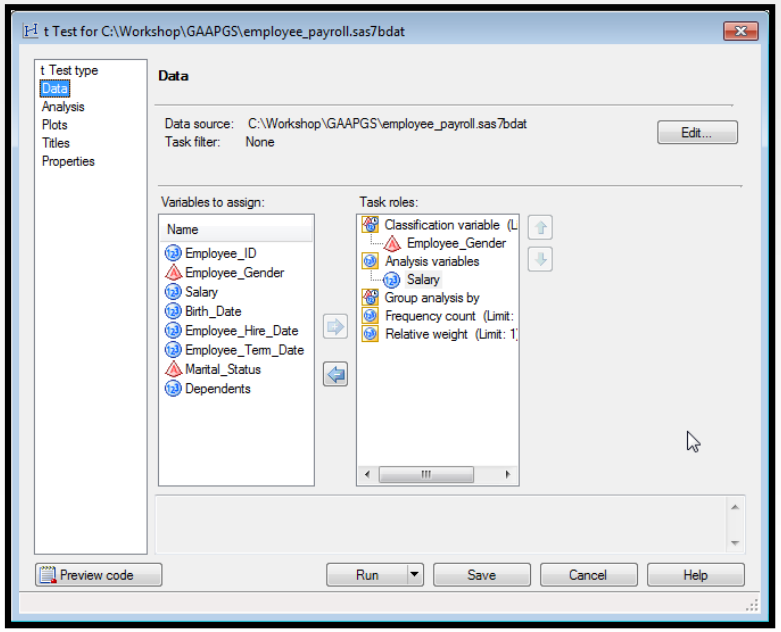




Exploring Data with Tasks

- Nonparametric One-Way ANOVA

  When the data are not normally distributed, the Nonparametric One-Way ANOVA (Analysis of Variance) task is appropriate to test for group differences. The Wilcoxon rank-sum test can be used for comparing two groups.



Exploring Data with Tasks

- Demonstration: Comparing Means

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