

## Choosing a Model

Type of Model:	Simple Linear Regression	Cluster Analysis	Time Series Analysis	Classification Analysis
<b>Purpose:</b>	<input type="checkbox"/> Predict the Dependent Variable using the Independent Variable . (For example, you could use a Simple Linear Regression analysis if you wanted to see if increasing your social media posting results in more conversions.)	<input type="checkbox"/> Subsetting Data: Breaking a large group into smaller groups based on similar traits. (For example, you could use a Classification Analysis to see how different audiences respond to the same ad.)	<input type="checkbox"/> Forecasting , i.e., predicting a value of the Dependent Variable at some time in the future. (For example, you could use a Time Series Analysis to understand how your social media followers have grown over time.)	<input type="checkbox"/> Predict the Dependent Variable using the Independent Variable. (For example, you could use a Classification Analysis if you wanted to see what types of products customers purchase more frequently.)
<b>Variable Requirements:</b>	<input type="checkbox"/> A Quantitative Independent Variable <input type="checkbox"/> A Quantitative Dependent Variable	<input type="checkbox"/> A Quantitative Independent Variable <input type="checkbox"/> A Quantitative Dependent Variable	<input type="checkbox"/> Independent Variable must be a <b>time</b> measurement <input type="checkbox"/> A Quantitative Dependent Variable	<input type="checkbox"/> A Quantitative Independent Variable <input type="checkbox"/> A Qualitative Dependent Variable
<b>Assumptions:</b>	<input type="checkbox"/> Minimum Sample Size: 20 <input type="checkbox"/> Linearity <input type="checkbox"/> Homogeneity of Variance <input type="checkbox"/> Normality <input type="checkbox"/> Independence	<input type="checkbox"/> Minimum Sample Size: 50 samples per grouping <input type="checkbox"/> Sphericity <input type="checkbox"/> Homogeneity of Variance <input type="checkbox"/> Equal Prior Probability	<input type="checkbox"/> Minimum Sample Size: 700 days, 100 weeks, 50 months, 40 quarters, <b>or</b> 25 years <input type="checkbox"/> Dependence <input type="checkbox"/> Stationarity	Assumptions for these analyses vary widely, depending on the specific analysis being performed.