



Getting Started with IBM SPSS Statistics

Jarlath Quinn – Analytics Consultant



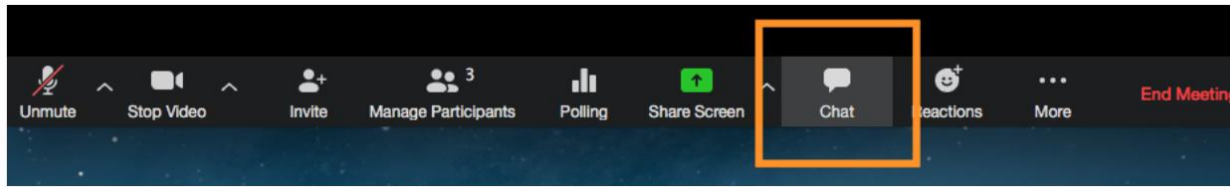
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Just waiting for all attendees to join...

FAQ's

- Is this session being recorded? Yes
- Can I get a copy of the slides? Yes, we'll email links to download materials after the session has ended.
- Can we arrange a re-run for interested colleagues? Yes, just ask us.
- How can I ask questions? All lines are muted so please use the chat panel – if we run out of time we will follow up with you.





- Gold accredited partner to IBM, Predictive Solutions and EDB specialising in advanced analytics & AI technologies
- Work with open-source technologies (R, Python etc.)
- Team each has 15 to 30+ years of experience working in the advanced and predictive analytics industry
- Deep experience of applied advanced analytics applications across sectors
 - Retail
 - Healthcare/Pharma
 - Finance/Insurance
 - Media/Telecoms
 - Utilities
 - FMCG
 - Charity/Housing/Government



Agenda

- An overview of SPSS Statistics
- Reading data from databases and spreadsheets
- Formatting the data
- Creating filters and banded fields
- Using SPSS Tables functionality to create publication-quality reports
- Finding statistically significant differences in groups

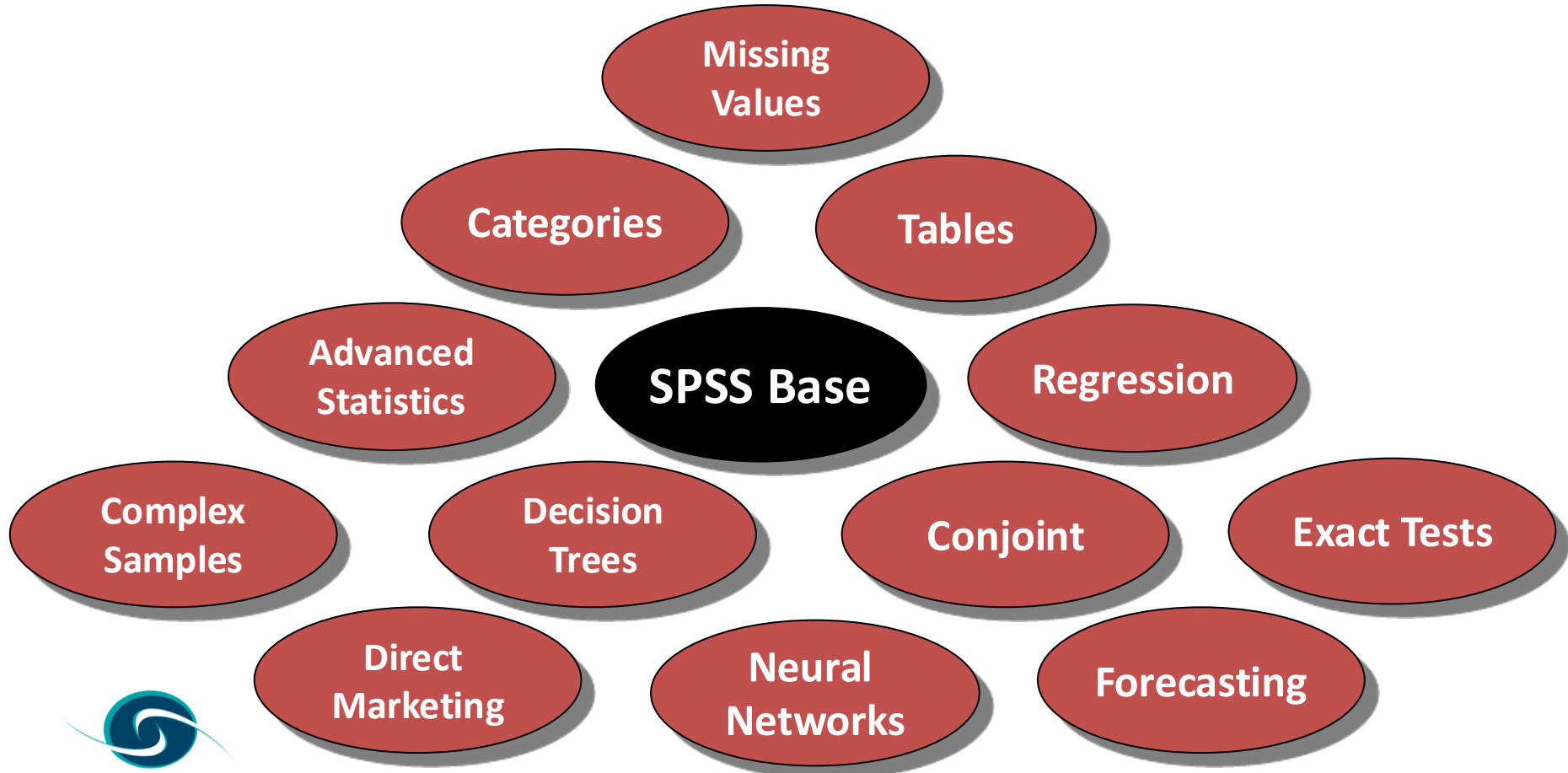


An Overview of IBM SPSS Statistics

SPSS Statistics

- Since 1968 one of the world's most popular data analysis and statistical interrogation platforms
- Used for everything from epidemiology studies , survey research and business reporting to direct marketing, credit risk, process modelling and asset management
- Statistics included in the base software:
 - Descriptive statistics: Cross tabulation, Frequencies, Descriptives statistics
 - Statistical Tests: T-test, ANOVA, Correlation
 - Prediction for numerical outcomes: Linear regression
 - Identifying relationships and groups: Factor analysis, Cluster analysis

IBM SPSS Statistics Base & Associated Modules

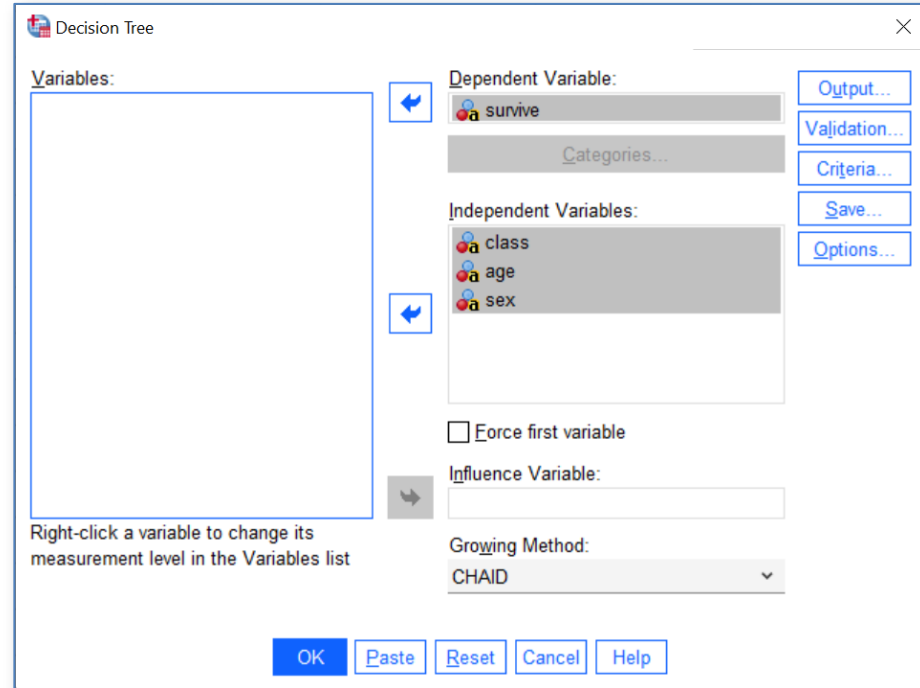




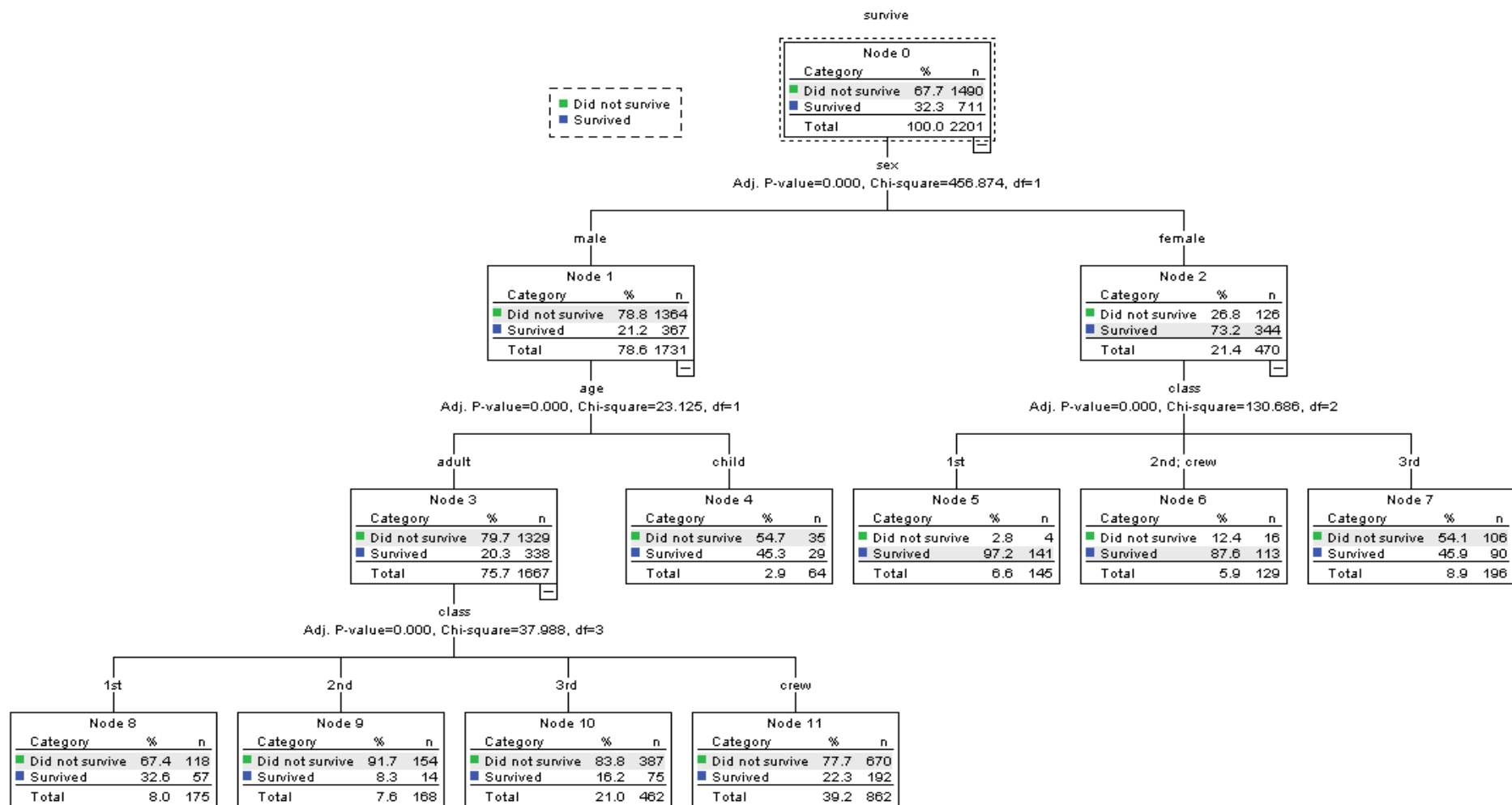
Example Module: IBM SPSS Decision Trees

SPSS Decision Trees

- Decision trees are used to:
 - Build predictive models
 - Create profiles of customers/employees/clients
 - Find key behavioural segments
- Very popular because they:
 - Represent models visually
 - Are easy to understand



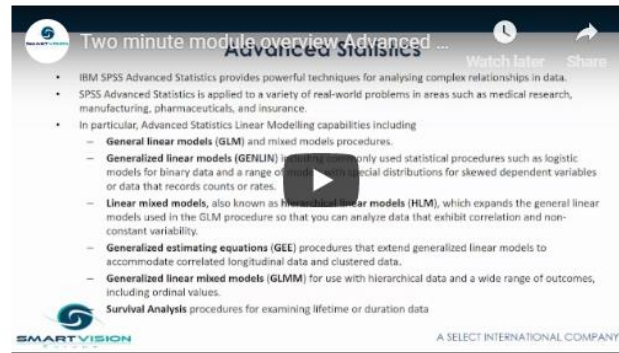
IBM SPSS Decision Trees



Smart Vision's Short Video Guides to SPSS Modules

IBM SPSS Advanced Statistics

Two minute module overview



What's in the Advanced Statistics module?

IBM SPSS Advanced Statistics provides powerful techniques for real-world problems in a variety of disciplines, including medical research, manufacturing, pharmaceuticals, and market research. It is an extremely 'analytically rich' SPSS Statistics module. Advanced Statistics includes a very wide range of multivariate procedures for investigating complex relationships in data. A number of the procedures in IBM SPSS Advanced Statistics are relatively technical in a statistical sense. In particular, Advanced Statistics encompasses General and Generalized Linear Modelling capabilities.

- General Linear Models allow you to model relationships and interactions between many factors. The general linear model incorporates a number of different statistical models: ANOVA, MANOVA, ANCOVA, Repeated Measures etc.
- An example of GLM would be one where we wish to see if males spend more money on average in a particular store than females when they have been given a particular discount coupon. The model can be made more complicated if we include more than one type of coupon or test to see whether region or age makes a difference.
- Generalized Linear Models are an extension of General Linear Models in that they are able to work with a greater range of data distributions. In particular, the model allows for the dependent variable to have a non-normal distribution.

SPSS modules

IBM® SPSS® Statistics Base

IBM® SPSS® Advanced Statistics

IBM® SPSS® Bootstrapping

IBM® SPSS® Categories

IBM® SPSS® Complex Samples

IBM® SPSS® Conjoint

IBM® SPSS® Custom Tables

IBM® SPSS® Data Preparation

IBM® SPSS® Decision Trees

IBM® SPSS® Direct Marketing

IBM® SPSS® Exact Tests

IBM® SPSS® Forecasting

IBM® SPSS® Missing Values

IBM® SPSS® Neural Networks

IBM® SPSS® Regression

IBM® SPSS® Bundles

Three Key Capabilities

The most effective users of technology like SPSS Statistics are able to demonstrate skills in three key areas:

1. Reading and formatting data
2. Transforming and manipulating data
3. Analysis and deployment of results



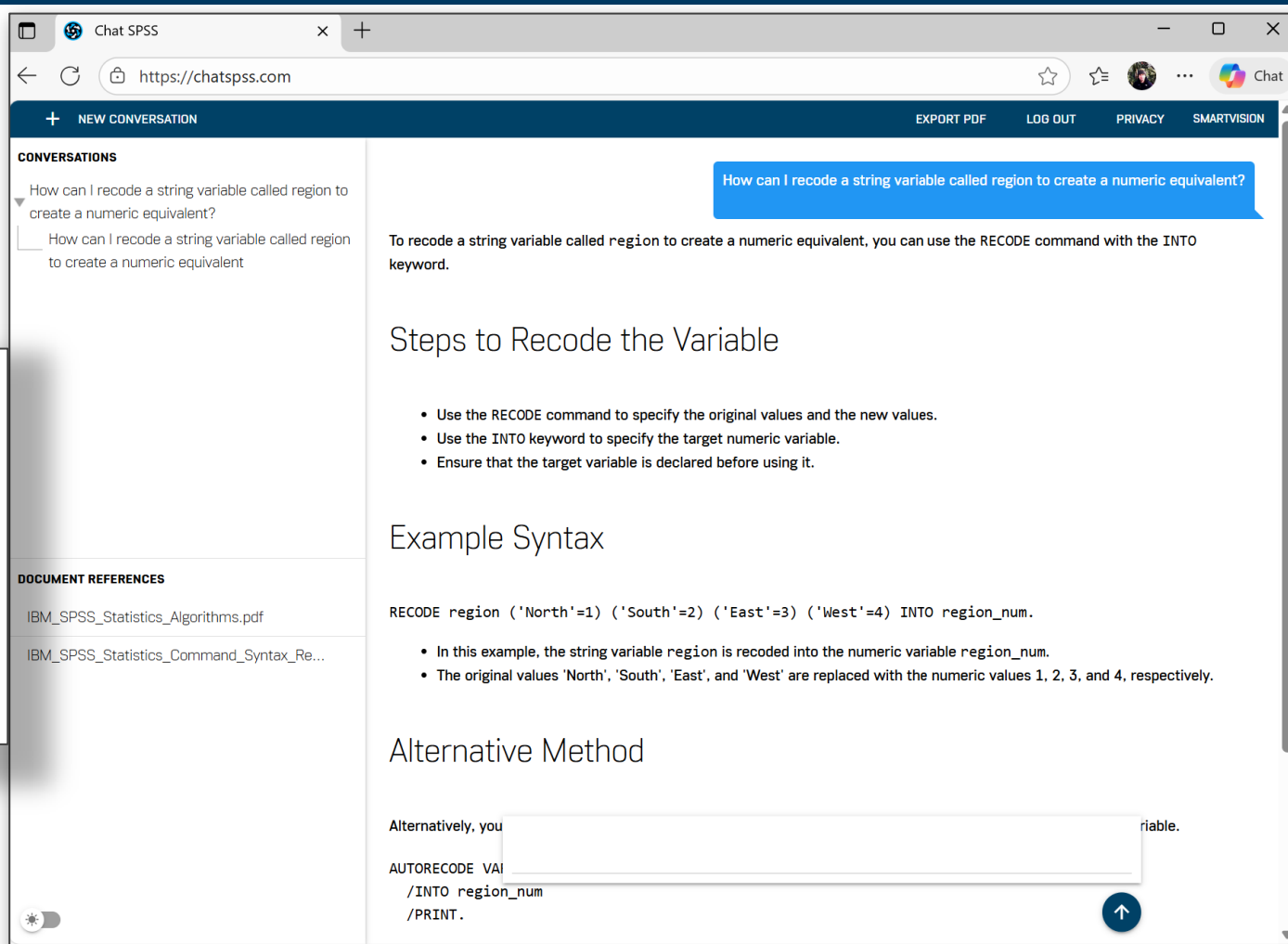
Let's take a closer look

Additional Resources

- [SPSS FAQs](#) everything from finding out what you have installed to how to merge files or change the language
- [Video Guides](#) a wide range of SPSS “how to” topics with mini demos
- [SPSS Software](#) information on products, modules and pricing
- [Eat your greens](#) blog series on statistical testing and procedures



ChatSPSS is a free generative AI chatbot developed by Smart Vision Europe Ltd based on official IBM documentation of SPSS procedures



The screenshot shows the ChatSPSS web interface. The browser address bar displays <https://chatspss.com/>. The page has a dark blue header with navigation links: NEW CONVERSATION, EXPORT PDF, LOG OUT, PRIVACY, and SMARTVISION. The main content area is divided into two columns. The left column, titled "CONVERSATIONS", shows a list of chat messages. The right column, titled "DOCUMENT REFERENCES", shows a list of document references. The main chat area on the right displays a conversation about recoding a string variable. A blue box at the top right of the chat area contains the question: "How can I recode a string variable called region to create a numeric equivalent?". The chat response explains that the RECODE command with the INTO keyword can be used. It then provides "Steps to Recode the Variable" and "Example Syntax". The example syntax is: `RECODE region ('North'=1) ('South'=2) ('East'=3) ('West'=4) INTO region_num.` It also provides an "Alternative Method" using the `AUTORECODE` command.

Chat SPSS

<https://chatspss.com/>

NEW CONVERSATION

EXPORT PDF LOG OUT PRIVACY SMARTVISION

CONVERSATIONS

How can I recode a string variable called region to create a numeric equivalent?

How can I recode a string variable called region to create a numeric equivalent?

To recode a string variable called region to create a numeric equivalent, you can use the RECODE command with the INTO keyword.

Steps to Recode the Variable

- Use the RECODE command to specify the original values and the new values.
- Use the INTO keyword to specify the target numeric variable.
- Ensure that the target variable is declared before using it.

Example Syntax

RECODE region ('North'=1) ('South'=2) ('East'=3) ('West'=4) INTO region_num.

- In this example, the string variable region is recoded into the numeric variable region_num.
- The original values 'North', 'South', 'East', and 'West' are replaced with the numeric values 1, 2, 3, and 4, respectively.

Alternative Method

Alternatively, you

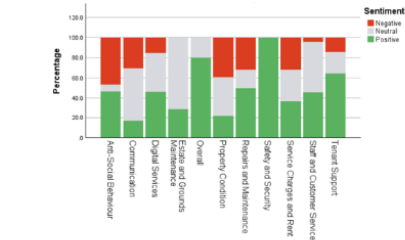
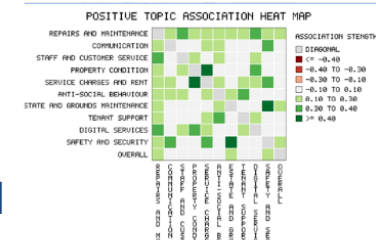
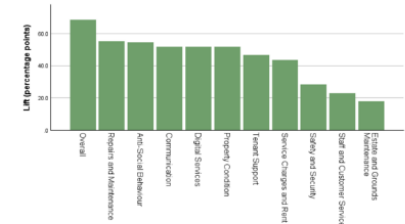
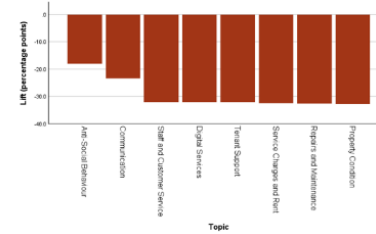
AUTORECODE VAI

/INTO region_num

/PRINT.

Try out Smart Vision's Watsonx.ai Text Categoriser

- Our [AI text mining tool](#) driven by Watsonx and IBM SPSS Statistics
- A single, plug and play extension that makes text analysis really easy
- Transforms open ended survey responses into structured data
- Automatically uncovers topics and categorizes data by topic and sentiment
- Uncovers relationships between topics and measures their impact on key target variables



[Download the free demo version and try it out for yourself](#)

Smart Vision Europe: Services and Expertise



We have decades of experience providing guidance, training and consultancy in the delivery of effective data science initiatives.

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 - <http://www.sv-europe.com/buy-spss-online/>
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 - Formal classroom/virtual training
 - Online self-paced training resources
- **Advice and Support**
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Thank you