“Table Insights” Module Transcript

Chapter 1

Intro to the Module, Topics covered, Learning Outcomes

Hey. My name is Hayley, and I'm on the One AI team here at One Model. As you learned in the "What is One AI?" module, embedded insights integrate statistical capabilities directly into your One Model storyboard tiles. In this module, we will explore Table Insights, which is an embedded insight that helps you spot groupings in your data where rates, like employee turnover or job satisfaction, are different or unusual from what you'd expect based on the overall average.

We will cover an introduction to table insights and how they work, the necessary data requirements for table setup, the information provided by Table Insights on One Model storyboards, and custom Table Insight configuration options.

After watching, you will use Table Insights to uncover unexpected groupings in your organization's data, such as high attrition rates or areas of gender imbalance. You will grasp the statistical concepts, such as proportional rates, p-values, and one proportion z-tests to interpret and leverage the insights effectively. And you will be able to set up and customize table insights within One Model, including adjusting settings for p-values and highlighting in order to tailor the analysis to your specific needs.

Chapter 2

Table Insights Introduction & Methodology

Section 2 - Introduction and Methodology

Table Insights help us answer a variety of important business questions, such as, are certain teams promoting a disproportionately small or large percentage of employees? Or do we have a high amount of attrition in certain areas of the company? Or does a gender imbalance exist in any departments within the company?

They do this by highlighting groupings in your organization's data where proportional rates, like voluntary terminations or employee engagement are different or unusual from what you'd expect based on the overall average. Table Insights compare the rate and population size for each grouping to the organization's overall rate and population size

and assign a probability value, or p-value, to each grouping to show how likely these differences are due to just chance.

That was a lot of words, so let's break that down a bit further.

The areas or groupings are created by breaking out the population metric by at least one dimension, such as gender or cost center. A proportional rate is one in which a subset of a population is divided by the entire population. For example, promotion rate or percentage of diverse employees headcount. The overall rate is the average rate for the entire population, usually your organization. The population size is the number of instances in the grouping or overall population and also the denominator of the rate metric, for example, headcount average.

And the p-value measures the probability that the difference between each grouping and the entire population is likely due to chance. P-values are expressed as numbers between 0 and 1, where values close to 0 indicate a difference worth noting, and values close to 1 suggest no noteworthy difference.

One AI table insights leverage the powerful one proportion z-test because it's a statistical method well-suited to proportional rates. In the simplest terms, this test determines if the proportion of the total population is likely to be different from what we'd expect it to be using math that compares it to what we think is normal. The methodology leveraged by Table Insights factors in both rate and population size and applies greater weighting to larger populations.

A team of 4 people where 2 of those people terminate employment is a different scenario than 500 employees terminating from a team of 1000, and we want to make sure we account for those differences.

Despite utilizing p-values, Table Insights does not provide statements of statistical significance. They instead call out groups that are behaving differently than others and the overall average, allowing you to investigate further with a predictive model by conducting targeted exploratory data analysis and variable analysis or other methods.

Table insights are applicable in many areas:

They serve as a data-driven starting point to uncover areas of bias or unequal opportunity within your organization. They focus on groups with abnormal rates, such as high attrition or poor quality of hire, to identify the drivers behind these unexpected rates and implement targeted interventions, and they highlight groups with rates that significantly differ from the company average, enabling early detection of potential issues that could impact organizational health and performance.

In the next section, we will head over to One Model so I can demonstrate how to set up a table to work with Table Insights in Explore.

Chapter 3

Data Requirements & Table Setup

Section 3 - Data Requirements and Table Setup

There are some specific criteria that we need to keep in mind when building this query.

First, the visualization type must be a list. Next, this list query must contain a proportional metric that is formatted as a percentage. You can adjust this in the metric editor if needed, but nearly all rate metrics built in One Model are built as percentages. We will use the termination rate metric for employees, but you could also use things like headcount growth rate or headcount percentage women.

Please note, we cannot include rates with values less than 0% or greater than 100%. If we wish to utilize table insights.

We must also include a population metric. This metric should be the denominator of the rate metric that we just used. Our denominator for the termination rate metric is Headcount (Average), so we will use that. Another common population metric is Headcount End of Period (EOP). You can check which metric is the denominator of your rate metric in the metric editor or on storyboards with drill through.

Finally, we also need to include at least one dimension to make our groups. Let's use Org Unit level 3. You can add as many dimensions as you want, but keep in mind that for every dimension you add, your groups will get exceedingly smaller and potentially less meaningful.

Also important to note, none of the included dimensions, including your time dimension can be pivoted if you want to utilize table insights, so we'll move this up to the "Dimensions" section.

Now that we are done building our query, we can run the query and pin to the appropriate storyboard.

As long as the query was built following the instructions we discussed, a light bulb icon will appear in the upper right corner of the table tile in the storyboard.

From this icon, you can run table insights on demand with a simple click.

Chapter 4

Information Provided by Table Insights on Storyboards

Section 4 - Information Provided by Table Insights on Storyboards

As you can see, table insights enrich tables by adding tons of valuable information. The overall average rate for the entire population contained in the table is generated and added above the table. A p-value column indicating magnitude of difference between each group and the overall population that can be sorted from most noteworthy to least is added to the far right of the table.

Highlighting is added to rows where the difference between the group rate and the overall rate exceeds the configuration threshold with color indicating either a positive or negative direction.

An information icon will appear in the tile header that when selected describes how table insights work.

And finally, a dynamically generated explanation of the p-value for the selected individual group is displayed when the p-value data point is clicked and drilled through. This is particularly helpful for folks that are less familiar with p-values because it will tell them the likelihood of these values being observed due to chance or if it could be occurring due to something else.

Chapter 5

Custom Configuration Options

Section 5 - Custom Configuration Options

Storyboard designers have the option to set up table insights to run automatically when a storyboard loads or users can run table insights on demand with the lightbulb icon. If you want users to be able to run table insights on demand or configure table insights for their personal view using the gear icon, they will need the can enable One AI table insights, application access permission added to their role. However, they do not need that permission to view table insights that have been configured to automatically run

when the storyboard loads. Only the storyboard editor will need that permission in that case.

Storyboard designers can configure table settings in storyboards with several custom settings in the discover tab of tile settings.

Storyboard viewers can configure nearly all of these settings from the gear icon that will appear in the upper right of the tile once table insights are run on demand, as long as the user has the appropriate application access.

First, you can adjust the alpha, which is the cutoff below which a p-value is considered noteworthy by increasing or increasing the default 0.05 by either using these arrows or inputting free text formatted as a decimal in this designated area.

Reducing the alpha value requires more of a divergence from the overall rate and or a greater weighting to be considered noteworthy.

You can also change the tailedness, which is defaulted to 'either direction', to either 'less than' or 'greater than' by using the dropdown menu. Tailedness is the direction in which the group rate differs from the overall rate. Please note that switching from 'either direction' to 'greater than' or 'less than' will result in the p-value numbers being halved, which could alter which rows are highlighted as noteworthy.

You could also use the respective toggles to sort by p-value display only noteworthy values and turn on and off the highlighting which differentiates between notably above mean and below mean rows of data based on the alpha.

There are two configurations that only storyboard designers have access to in the tile settings.

First, they can enable table insights to run automatically each time the storyboard loads by flipping this table insights toggle to 'Yes'.

And second, they can adjust the highlighting colors for above mean and below mean by inputting a new hex code in the designated field or clicking on the color box and using the color picker like so. The default colors are set to a light red for above mean and a light blue for below mean.

Chapter 6

Conclusion & Thanks

Thanks for joining me to learn more about Table Insights. We explored how table insights can help identify areas within your organization that differ from overall trends and expected values. You are now equipped to set up and use table insights in One Model to drive meaningful improvements in your organization. By leveraging these insights, you can identify areas of bias, high attrition rates, and other critical issues effectively. Happy modeling!