

This was a project for a course I took on using Excel for Data analysis. It was based on a real survey done by a website that covered AirBnB that the course instructor ran. He provided the data in an Excel file.

The first thing I did was open up the file and glance over it to familiarize myself with the data and what was available. I could see that each row represented a single completed survey, and I got a feel for what columns I had to work with. I got rid of some of the fields that I knew I wouldn't need, such as the date and time they started the survey and time they completed it. I also didn't need the language they completed it in and who referred it. I didn't need session ID or several other fields. There were some fields I was still unsure of whether I would need them, so I left them behind for now.

I started by looking directly at the demographics within the data. One of the first things I wanted to see was the breakdown of males and females among AirBnB hosts. For this, I created a new sheet and copied just that section of the original data into the new sheet. I set up a new column with the distinct values of the gender responses, which were Female, Male, and Other. I used a CountIF field in the next column to get a count of male, female, and other respondents based on column A. In the column I used a calculation to get the percentage breakdown for each gender. This gave me the data I needed to add a pie chart, which I did. I changed the chart format to show as I desired, switching to percentage from value, moving the legend, and setting the title.

I then moved on to age, ethnicity, education level, and employment status, completing the steps above for each of them. Because these columns had many more unique choices, I got the list (Bachelors Degree, Masters Degree, etc. for education level, for example) by selecting the entire relevant column, pasting it, then removing duplicates. Another option would be to use a pivot table, which would make these steps easy as well. For example, you could select the gender as your row, then in values put a count of the response ID and the percentage of the response ID column total for the gender step we did previously.

I then cleaned up the data somewhat, because it became obvious at this point at least part of the columns I would not be using. I removed dozens of columns that had little or no data in them, but not all of them I wouldn't be using. I left ones that could potentially be useful at a later date.

I created a pivot table based on the data for use in the next step. Everything I did above with demographics could have been done with multiple pivot tables on one sheet, had I chose to do it that way. But, because this was part of a course that I took, I did it the way they instructed. In the future, I'd personally use the pivot table, as it is more flexible, easier, and less prone to mistakes (such as missing some of the data or having a typo in one of the calculated fields).

For our current purposes, I used pivot tables to look at the Motivations for AirBnB hosts and the problems they encountered. I did this by creating the new pivot table sheet, setting the column, row, and values settings for Motivations for Becoming a Host. I then created a pie chart from those results. I moved that pivot table down below the visible top section of the worksheet, allowing a user to focus more directly on the results. I then copied that pivot table to answer each of the multiple questions that came up that were related to motivations. I created charts for each of these, Biggest Headaches, Frequency of Listing Updates, Impression of AirBnB, and Anticipated Risk to Personal Property by Potential Hosts. This created a sort of dashboard specifically targeting motivations.

For this motivations dashboard I also added slicers from the pivot tables by clicking on a pivot table and inserting a slicer, which I moved to the top near the charts. There is a slicer for gender, age, and more. I applied the slicer to each of the relevant tables, which then shows in the connected charts. I did this for each of the multiple slicers I created.

I then moved on to the Revenue section, where I created multiple pivot tables and charts in a similar manner as above for the topics related to revenue.

I created a Data Explorer tab, where users could modife the pivot tables at will and explore the data in any way they choose. I opied the data for overall impression of AirBnB down below the pivot table so we'd have a record of that in case they change the pivot table, and I also created a second copy just to show the numbers as percentages.

I moved on to an Observations tab. I created a list of observations I noticed while exploring

the data. After creating this list, I then created a hyperlink to the specific worksheet and row that provides that data. By doing this, there is a simple, single page with a group of answers I could address, making it easy for someone to review these at a later time and see the actual data for each.