Tableau Live Examples

# Load Data

* Hotel bookings data using the text file connect (csv file)

# Data Prep

* Change ‘Is Canceled’ and ‘Is Repeated Guest’ data fields to Boolean type???
  + Won’t let me with 0s and 1s…
* Change ‘Lead Time’ to ‘Lead Days’ for clarity
* Change ‘Stays in Weekend Nights’ and ‘Stays in Week Nights’ to ‘Number of Weekend/Week Nights’ for clarity
  + Remember, whoever you show your visualization to is not going to have studied the data as you have. Being as clear as possible is crucial. Don’t make them think about things that are important to the point you are trying to make with you visualization
* Change ‘Country’ to ‘Country of Origin’
* Change ‘Adr’ to ‘Average Daily Rate’
* Change ‘Total of Special Requests’ to ‘Number of Special Requests’
* Covert ‘Company’, ‘Agent’, and ‘Is Repeated Guest’ to Dimensions
* Make ‘Arrival Date Year’, ‘Arrival Date Week Number’, and ‘Arrival Date Day of the Month’ Discrete

# Filtering a Continuous Measure with the Filter Card and Lasso

* Create a map of the countries with the number of adults from each country is the fill color
  + Longitude as Columns
  + Latitude as Rows
  + Automatic as Plot type
  + Country of Origin as Detail
  + SUM(Adults) as Color
  + SUM(Adults) as Label
* Make Filter with Filter Card
  + SUM(Adults) as Filter
    - Choose Aggregate as SUM
    - Choose At Least -> 1000

# Filter a Discrete Dimension with the Lasso Select

* What if we only wanted European countries with > 1000 Adults? We could either:
  + Drag ‘Country of Origin’ filed to Filter card and select each country we want (long time)
  + Lasso select the European countries
    - Show how you can change your lasso type with left arrow
    - Show how it automatically creates an item in the Filter card with the right countries selected
    - Show the different options that come up when you make a lasso selection:
      * View Data items
      * Keep Only
      * Exclude

# Interactive Filters

* What if we want to look at how many kids are involved in bookings at different times throughout the year to make sure that we have enough special supplies/activities for them?
  + Create a bar chart with ‘Arrival Date Month’ in Columns and ‘SUM(children) in Rows
  + Use the drop down arrow of the data pills to ‘Show Filter’ for both fields
  + Play around with the different customization options

# Groups

* Now what if we wanted to filter on something that isn’t explicitly defined? For instance what if we wanted to find not just how many kids were coming every month, but specifically how many kids were coming every month from say South America?
  + That’s more specific, but we don’t have a field that gives us the name of the continent.
  + We could theoretically filter by selecting every single checkbox for South America, but what if we were doing a whole study on South American hotel booking behavior and we didn’t want to have to make that filter manually every time?
  + That is where groups come in to play
* Create a South American group
  + Click on ‘Country of Origin’ 🡪 ‘Create…’ 🡪 Group
  + Show the process of selecting with CTRL held for a couple of countries
  + Show the process of using ‘Find’ for a couple of countries
* Take them to the worksheet where I already created groups for different continents
* Filter on group
  + Add ‘Country of Origin (group)’ into filter card 🡪 Choose ‘South American Countries’ to include
  + Show filter
  + Show how you can use the same ‘Country of Origin (group)’ in the marks card as Color in a line chart or things like that
* What if instead we wanted to see which country in South America had the most children involved in bookings?
  + Put the ungrouped ‘Country of Origin’ in Columns instead of the grouped one, while still keeping the same South American filter

# Sets

* What if we wanted to know countries of origin where people always book at least a month in advance (lead time >= 30 days). It’s kind of like finding the countries where people don’t procrastinate…
  + See now this is different than making a group. We don’t know off the top of our heads which countries meets this requirement.
  + It is like the difference between using General and using Condition when making a filter on a dimension
* Make it without sets first:
  + Put ‘Longitude’ in the Columns shelf, ‘Latitude’ in the Rows shelf, and ‘Country of Origin’ in the Detail Mark
  + Add ‘Lead Days’ to the Filter card, choose Minimum aggregation, At Least as the filter, and set 30 as the least
* Now say we are now interested in studying this group of countries more because we are doing a whole report about different aspects of countries that are really on top of their planning. A set is how we save this subset of the countries.
  + If we want it to be a Fixed Set, we could lasso all of the countries on the viz. Demonstrate
    - As you can see, it creates a set out of very specific countries. Since it has explicitly named the countries that are included, if our data changes and say the information for another country is added and it turns out that there aren’t any bookings with a lead time of less than 30 days for that country, it still won’t be included in our set.
  + If we want it to be a Dynamic Set, we have to create a set from that dimension data field in the data pane:
    - Click down-arrow on ‘Country of Origin’ in the data pane, click Create 🡪 Set
    - If we just choose countries here, it would be just like that fixed set except that we would have to go through like a group and select them ourselves.
    - Instead, choose the ‘Condition’ tab, select ‘By field:’, choose the ‘Lead Days’ field, and set it to the same filter that we used for our visualization.
    - Name it ‘Countries That Plan Ahead’
    - Now take out the filter in the viz and replace it with the set we just made
    - Now since this set was defined with a condition instead of explicitly choosing countries, if new data is added then if that data meets the conditions that country will be added to the set as well

# Hierarchies

* Sometimes Tableau with recognize hierarchies for you:
  + Create horizontal bar chart with ‘SUM(Adults)’ in Columns and ‘Reservation Status Date’ in Rows
  + Show how the number of bars in the chart changes as you drill down into the date hierarchy using the data pill
  + Show how to ‘zip up’ the hierarchy
* Other times we have to create it ourselves. It would be nice to be able to treat the arrival date like the reservation status date, but the date info is spread out across different data fields so we are going to have to create our own hierarchy from those disparate fields.
  + Create a hierarchy called ‘Arrival Date’ that includes ‘Arrival Date Year’, ‘Arrival Date Month’, ‘Arrival Date Week Number’, and ‘Arrival Date Day of Month’ in that order
  + Exchange the new hierarchy into the place where ‘Reservation Status Date’ was in the viz (Rows shelf)
  + Show how the bar chart changes as you drill down and up the hierarchy on the visualization