

1-Query 1: what is the name of the Artist who has the highest sales?

```
Select
Customer.FirstName, Customer.LastName, Artist.Name
Artist_Name, sum(InvoiceLine.UnitPrice*Quantity) as
totalsales
from Customer
join Invoice
on Customer.CustomerId=Invoice.CustomerId
join InvoiceLine
on Invoice.InvoiceId=InvoiceLine.InvoiceId
join Track
on InvoiceLine.TrackId=Track.TrackId
join Album on Album.AlbumId=Track.AlbumId
join Artist on Artist.ArtistId=Album.ArtistId
group by 3 order by 4 desc;
```

2- Query 2: which customer spent the most on this artist?

```
select a.Name as Name, sum(il.unitprice) as  
AmountSpent, c.Customerid, c.Firstname, c.lastname  
from Artist a  
Join Album al  
ON al.Artistid = a.Artistid  
Join Track t  
ON t.Albumid = al.albumid  
Join InvoiceLine il  
ON il.Trackid = t.Trackid  
Join Invoice i  
ON i.Invoiceid = il.Invoiceid  
Join Customer c  
ON c.Customerid = i.Customerid  
WHERE a.name = 'Iron Maiden'  
Group by c.Customerid  
Order by AmountSpent desc;
```

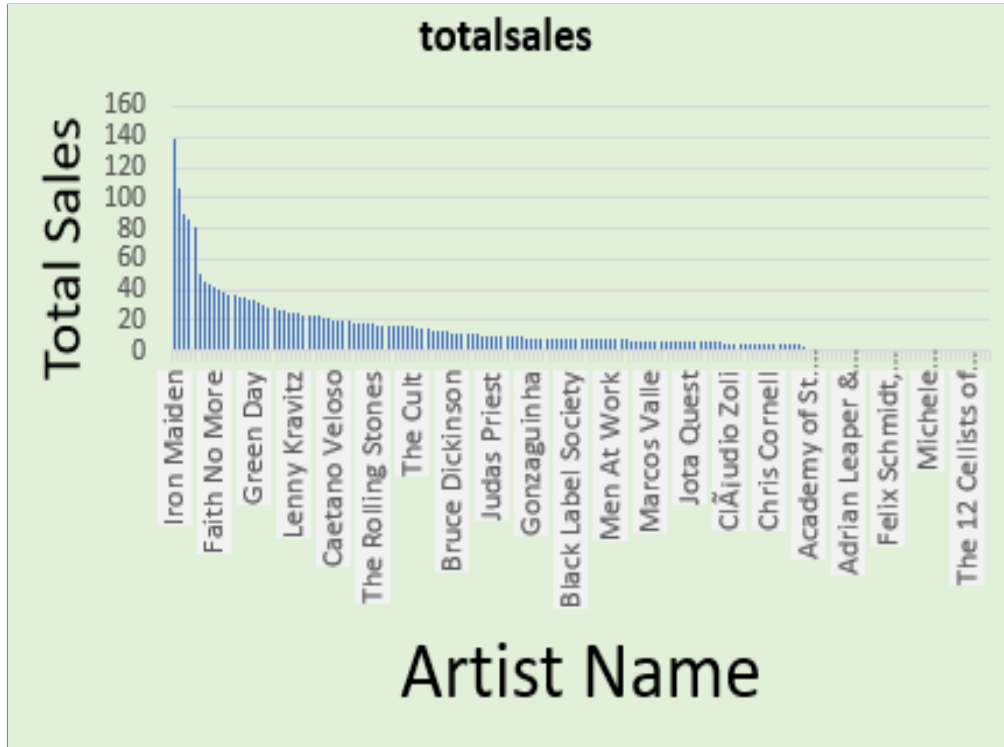
3-Query 3: What is the city of the best Customer and who he is?

```
SELECT Customer.FirstName, Customer.LastName,  
BillingCity, SUM(Total) as Total_Spent  
FROM customer  
join Invoice  
on Customer.CustomerId = Invoice.CustomerId  
GROUP BY 1,2  
ORDER BY Total_Spent DESC;
```

4-Query 4:Who is the best customer of Rock genre and what is his Email ?

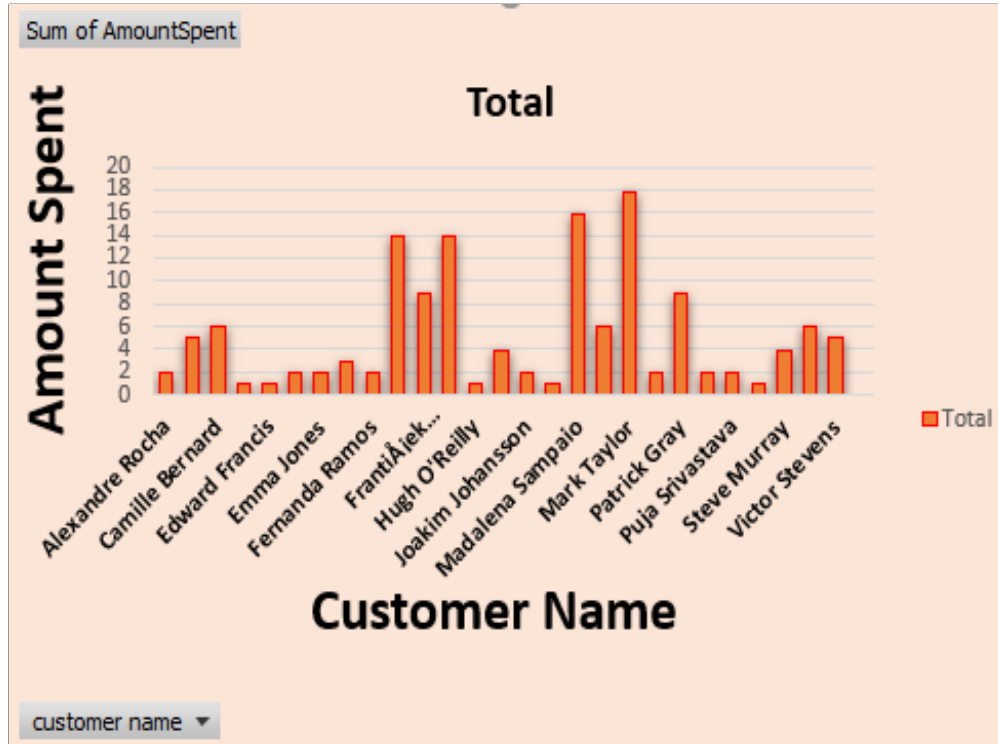
```
Select
Customer.Email,Customer.FirstName,Customer.LastName,Genre.Name, Sum(Invoice.Total)
FROM InvoiceLine
JOIN Invoice
ON InvoiceLine.InvoiceLineId=Invoice.InvoiceId
JOIN Customer
ON Invoice.CustomerId=Customer.CustomerId
JOIN Track
ON InvoiceLine.TrackId=Track.TrackId
JOIN Genre ON Track.GenreId=Genre.GenreId
where Genre.Name = "Rock"
GROUP BY Customer.Email
ORDER BY 5 desc;
```

1-what is the name of the Artist who has the highest sales?



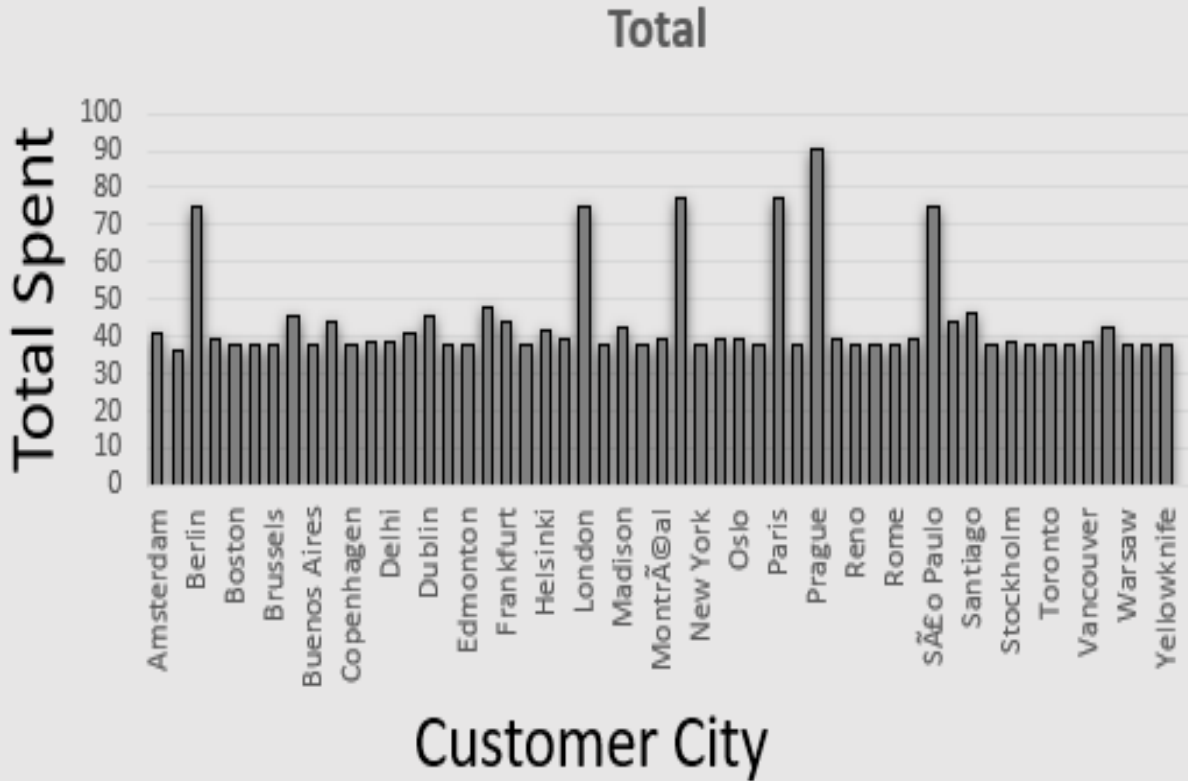
When we look at the chart (clustered column) we find that the artist Iron Maiden has the highest sales.

2- which customer spent the most on this artist?



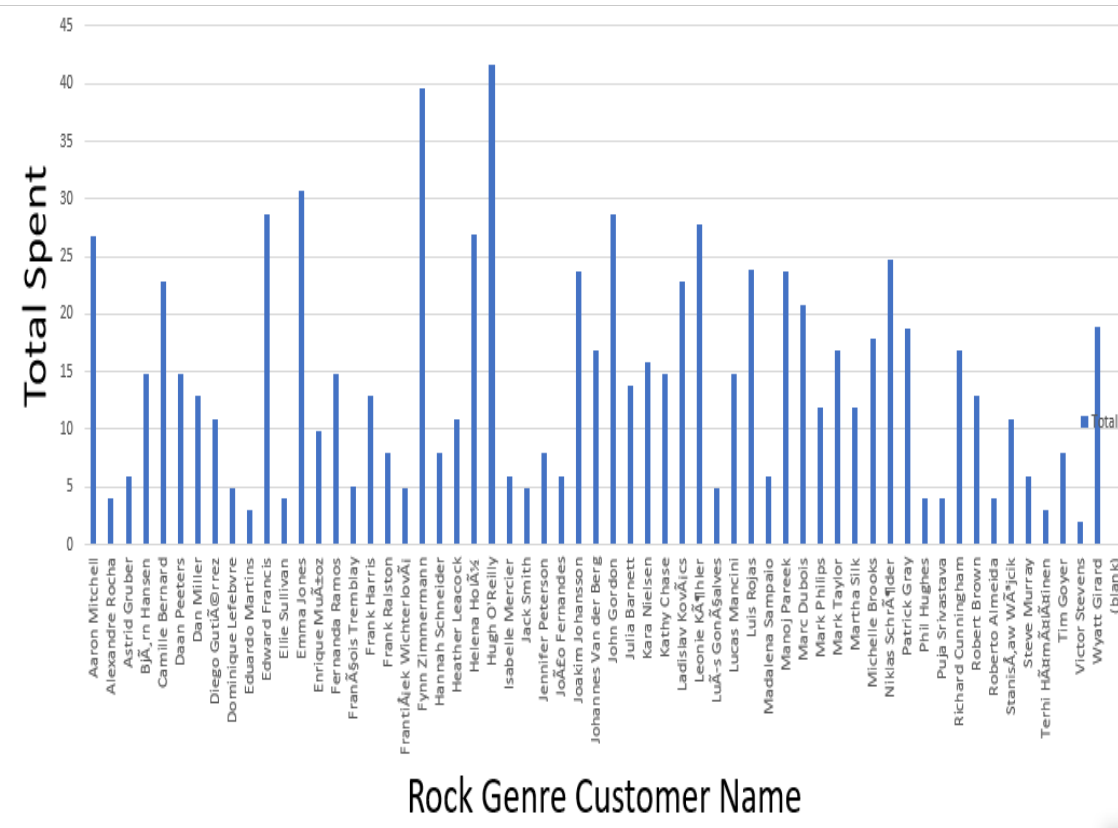
When look at the chart (pivot clustered column) we see that the customer spent the most on this artist is Mark Taylor.

the who is best Customer and What is her city ?



When we look at chart we found that the best customer city is Prague and the best Customer is Helena Holy.

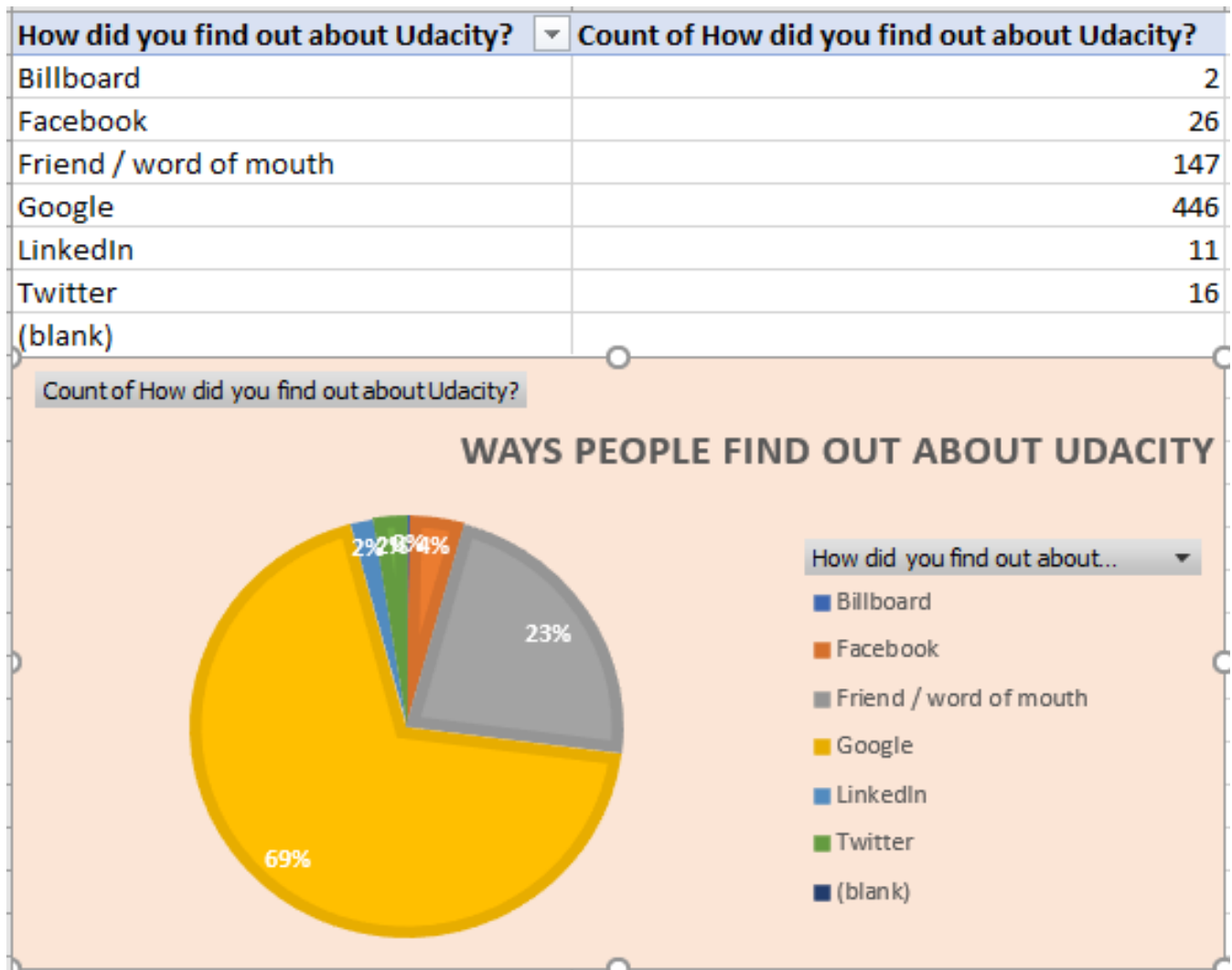
4: Who is the best customer of Rock genre and what is his Email ?



When we look at the chart we find that Hugh O'Reilly the best customer of the Rock genre.

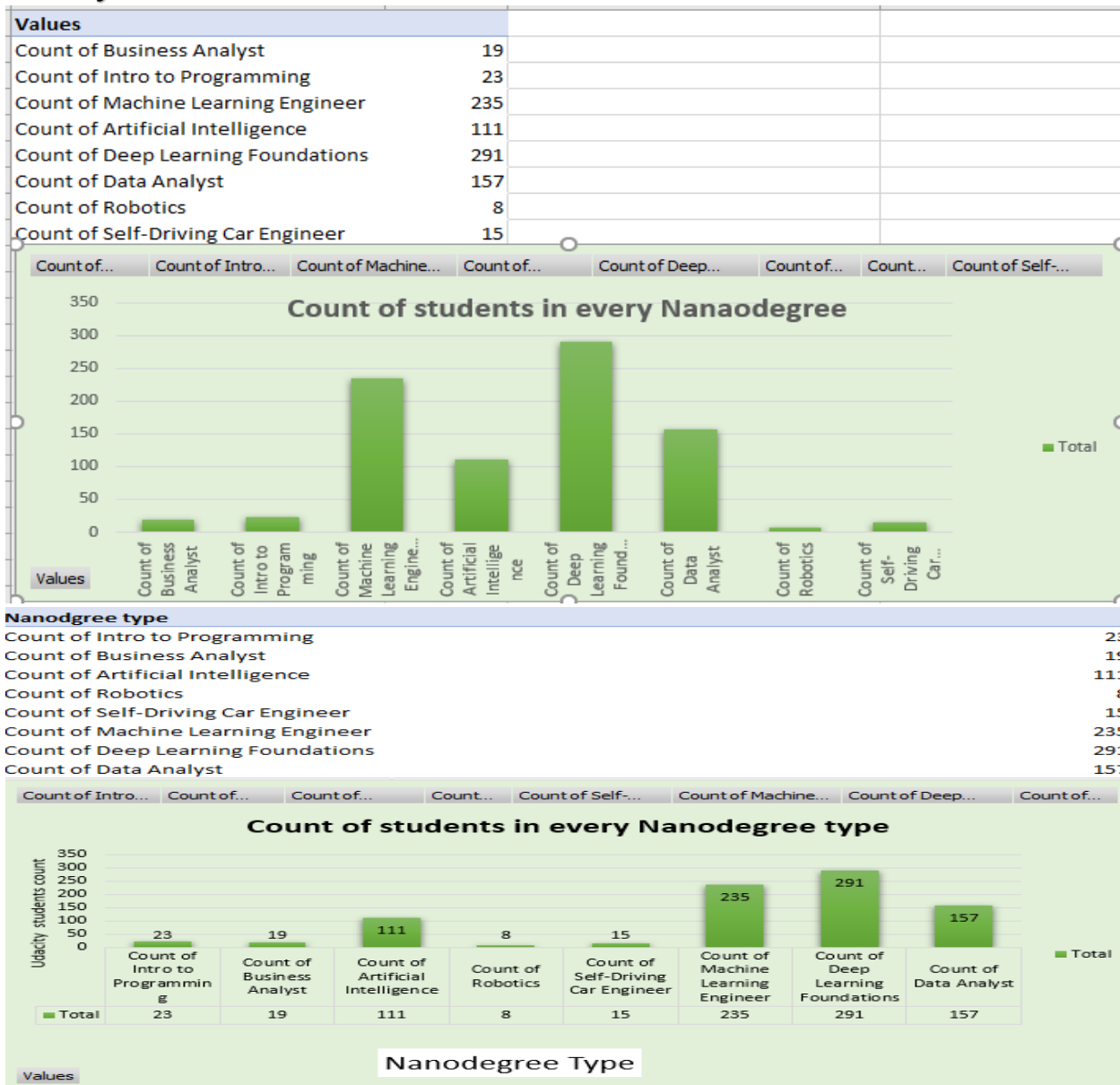
His Email is hughoreilly@apple.ie

- What is the most common way people find out about Udacity?



Here is the pie chart of percentage of every way people find out about Udacity from the chart I find that Google has 69% percentage so the most common way people found about Udacity through searching using Google engine.

- What is the most common Nanodegree program represented in the survey results?



Here is the clustered chart for nanodegree type vs number of Udacity student 291 students are enrolled in deep learning foundation nanodegree from 754 students.

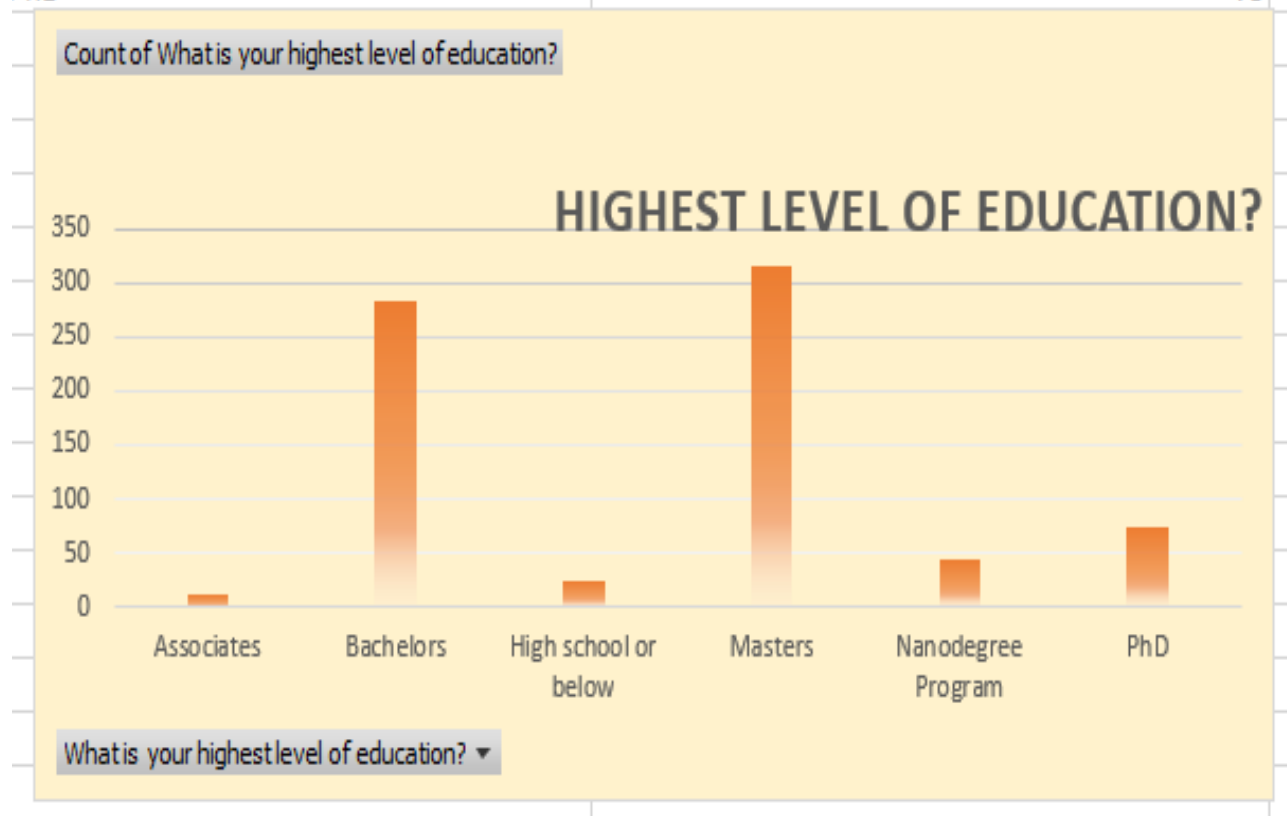
235 students are enrolled in machine learning engineer nanodegree from 754 students.

So, most students enrolled in deep learning foundation nanodegree and machine learning engineer nanodegree.

The most common Nanodegree program represented in the survey results was deep learning foundation nanodegree.

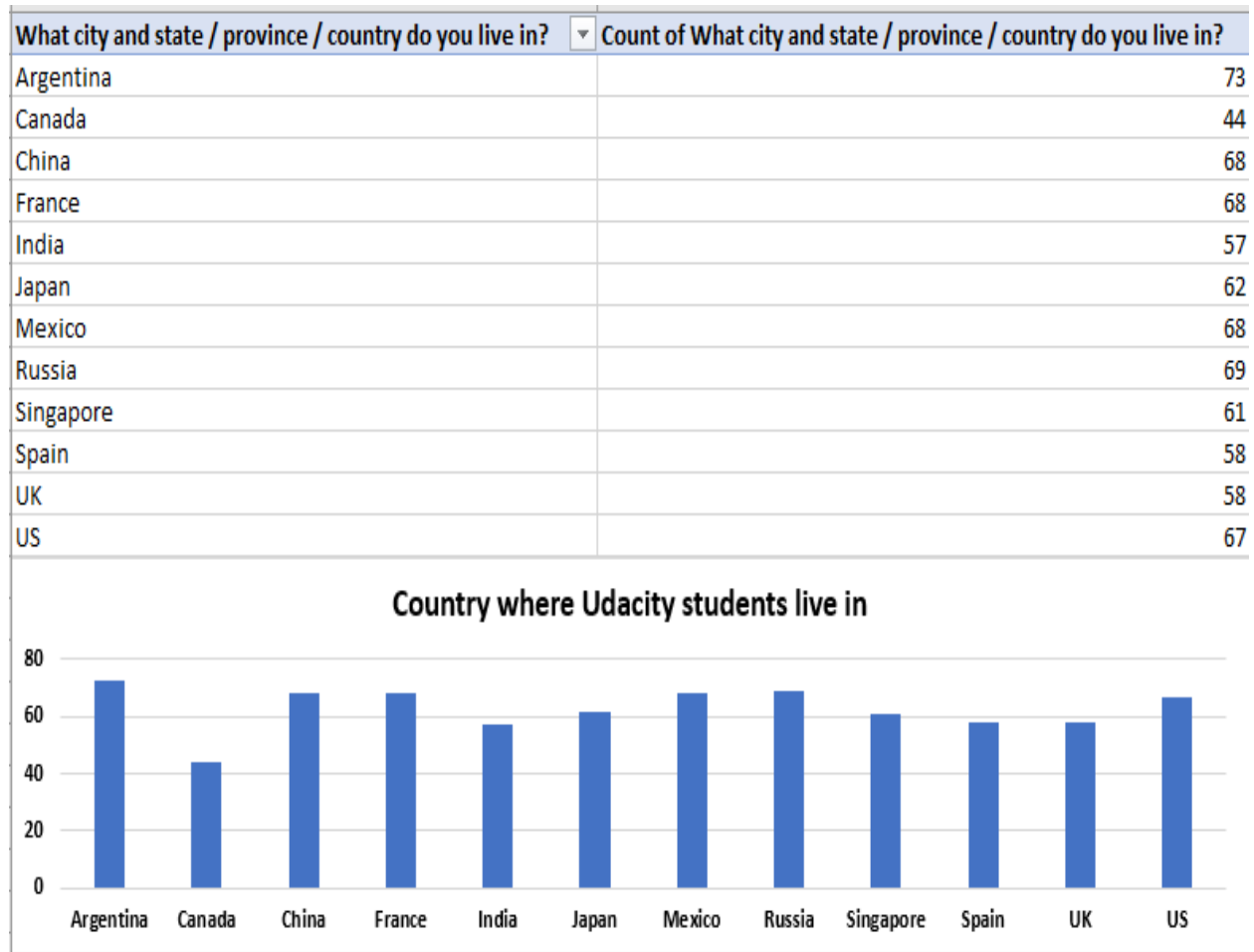
- What is the highest level of education for most students?

What is your highest level of education? ▾	Count of What is your highest level of education?
Associates	12
Bachelors	283
High school or below	24
Masters	316
Nanodegree Program	45
PhD	73



Here is clustered chart of education level of Udacity student vs count of Udacity student, I find that master Degree and bachelor degree both have the highest score 316 students and 283 students, so most students have master degree then bachelor degree as highest level of education.

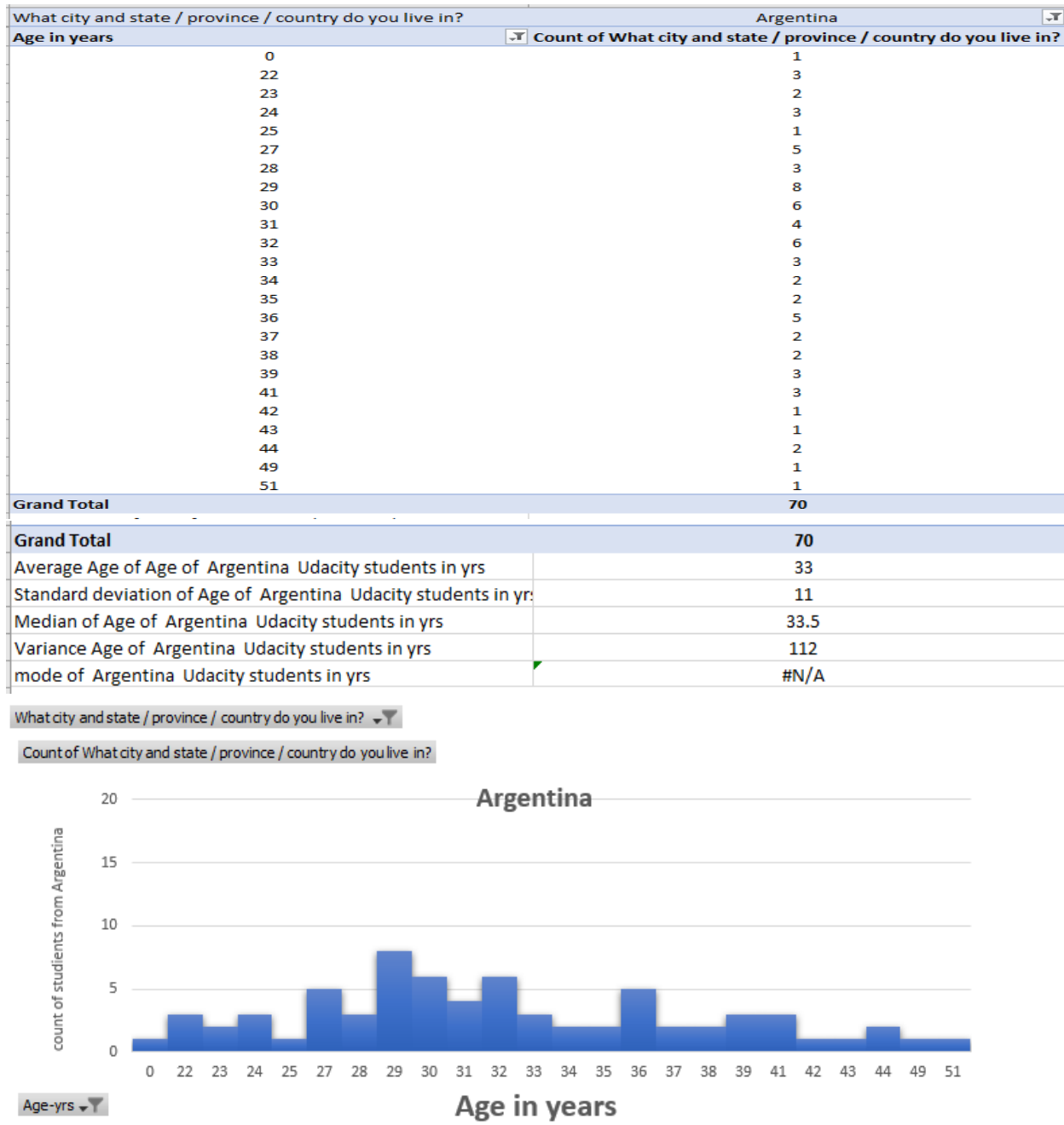
- What are the most common countries/cities where students live?



Here is the clustered chart of country where Udacity student from vs count of Udacity students

I find that most of Udacity students from Argentina, Canada, China, France, India, Japan, Mexico, Russia, Singapore, Spain, UK and US.

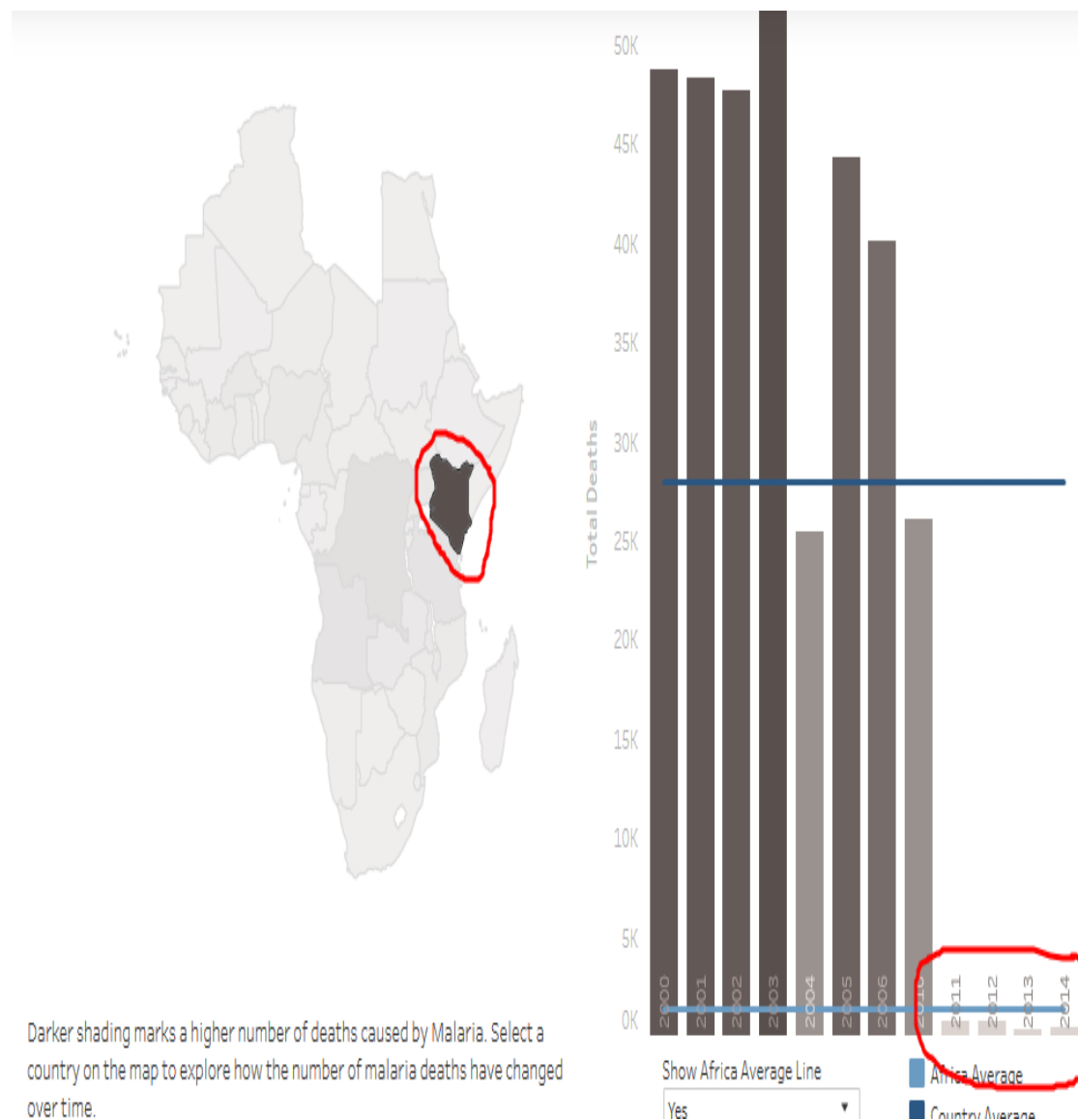
So I choose the biggest score (Argentina) and make qualitative analysis for the Age of students from there.



The First Insight is cure state or recovery from Malaria happened between 2011 and 2014 in Kenya:

From that dashboard, I clicked on Kenya on the map, and this showed deaths due to malaria for each year from 2000 to 2014.

Before 2011, there deaths per year reached more than 50K deaths and were above Africa average deaths due to Malaria per year. After 2010, starting in 2011, deaths were gradually reduced below Africa deaths average due to Malaria per year.

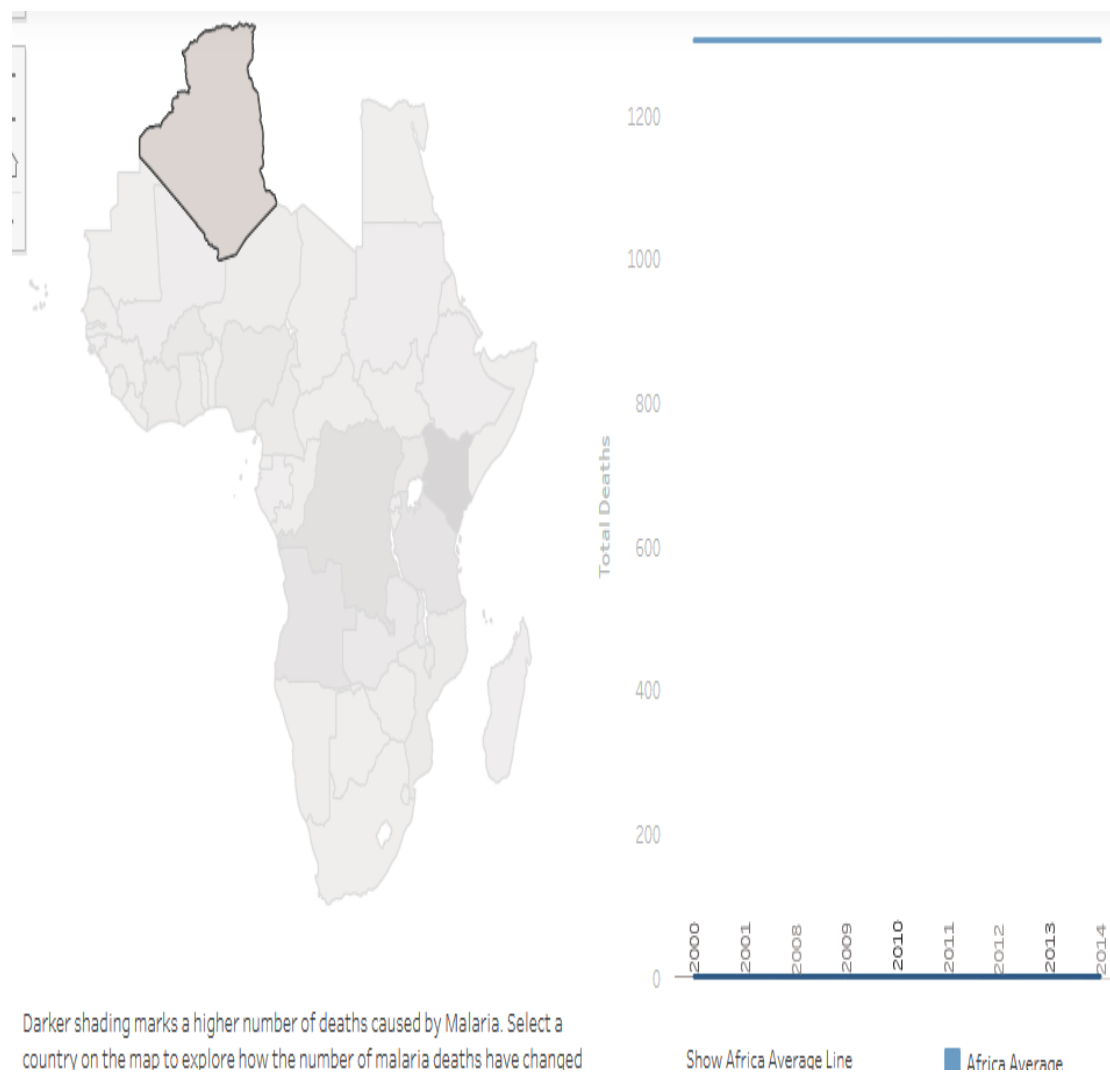


The Second Insight is Algeria were the cleanest country in Africa from Malaria between 2000 and 2014:

From that dashboard, I clicked on Algeria on the map and compare it with the rest of Africa countries regarding the Average number of deaths per year for each country of African Countries due to malaria from 2000 to 2014.

Clicking Algeria show me that The Average of deaths due Malaria per year were only one case for every year between 2000 and 2014.

Doing this for all countries, I found that Algeria has the least average number of deaths between 2000 and 2014 among Africa countries due to Malaria.

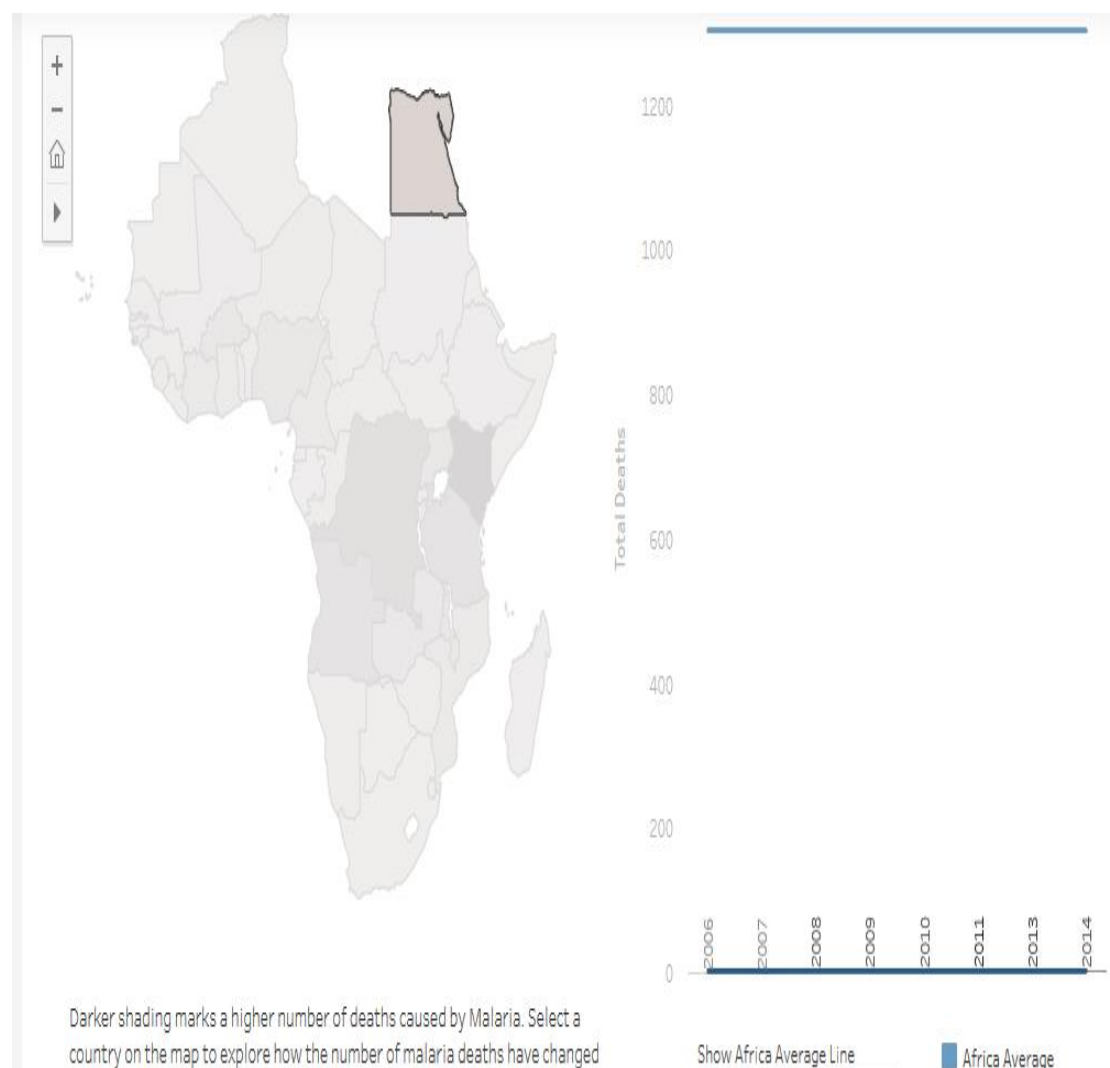


The Third Insight is Egypt were the Second cleanest country in Africa after Algeria from Malaria between 2000 and 2014:

From that dashboard, I clicked on Egypt on the map and compare it with the rest of Africa countries regarding the Average number of deaths per year for each country of African Countries due to malaria from 2000 to 2014.

Clicking Egypt show me that The Average of deaths due Malaria per year were only Two cases for every year between 2000 and 2014.

Doing this for all countries, I found that Egypt has the second least average number of deaths between 2000 and 2014 among Africa countries due to Malaria after Algeria.



Screen shots Source: <https://public.tableau.com/en-us/s/gallery/malaria-africa?gallery=featured>

Tableau Project Report

- **Links to your dashboards or story:**

<https://public.tableau.com/profile/tamer5491#!/vizhome/DelayandCancelationofflightsofUSAin2015/DelayandCancelationofAirlinesflightsStoryTelling?publish=yes>

- **Summary:**

- 1) When go deep and search for also the highest Airline flight Cancelation we found that Southwest Airlines Co. has the highest number of flights cancel and the most reason for that was reason B
- 2) The most cancellation (1058 cancellations) were happened in Feb 2015 and Because of the reason B 782 occurred.
- 3) 3.When I look at the bar chart of airline delay, I found that Southwest Airlines Co. is the most Airline that has the worst delay.
- 4) 4.I found also that the most causes of delays are the Departure Delay and late Aircraft Delay.
- 5) The causes of delay are of six types.
- 6) We can see all of those insights we mentioned before in the same dashboard which make us reach a conclusion that the worst Airlines In the level of commitment to Air Transportation service time line was Southwest Airlines Co (WN) in 2015

- **Design:**

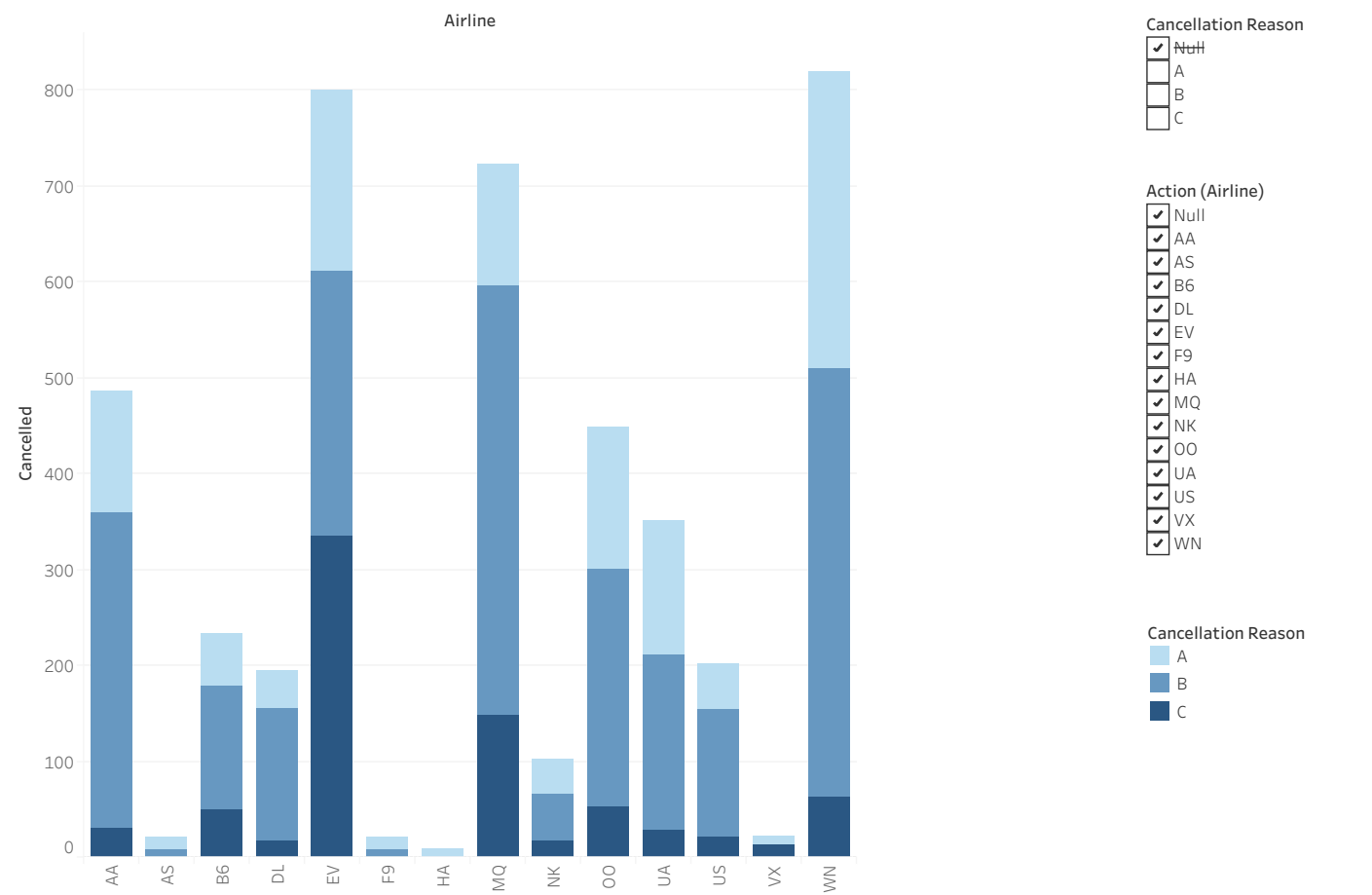
1. I choose Stacked Bars chart to show the deferent types of cancelations and the amount of cancelation vs causes by what airline
2. I choose Line chart to measure the sequence of every cancellation reason.
3. I choose the Bar chart for the first Insight to make easy estimation of the most Airline has the worst delays.
4. I choose the Line chart to define the most causes of delay which are departure and late aircraft delays and the most delays happened in what Airline (WN).
5. I choose the Box Plot for the second Insight to find the outliers for airline and all causes of flights delay.
6. Then I group all charts of delays in one dashboard and make the first bar chart the filter for other charts and insights of delays.

- **Resources:** N/A

- **Data source:** flight-delays zip

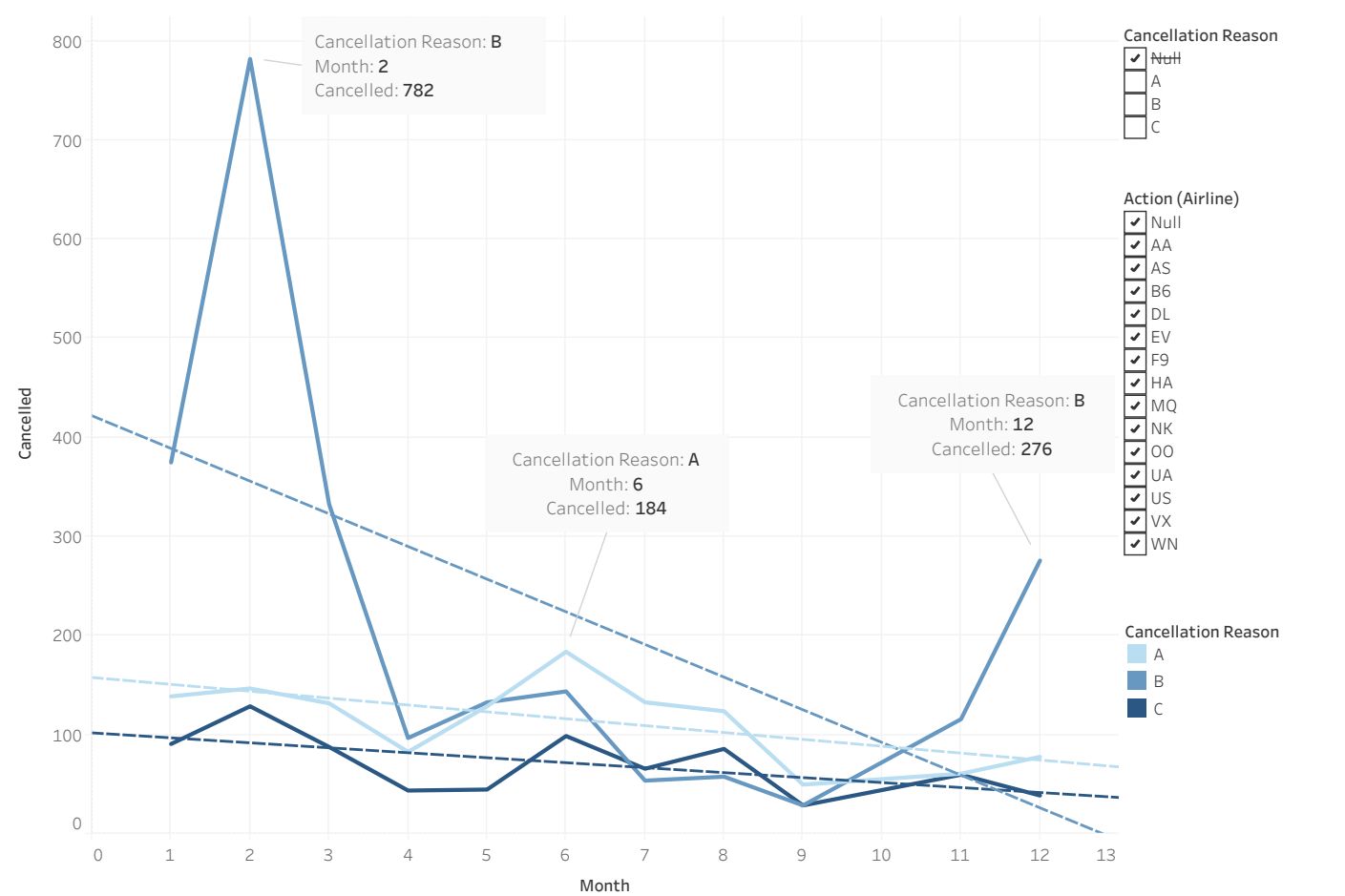
Delays & Cancellations of Airlines flights in USA 2015:

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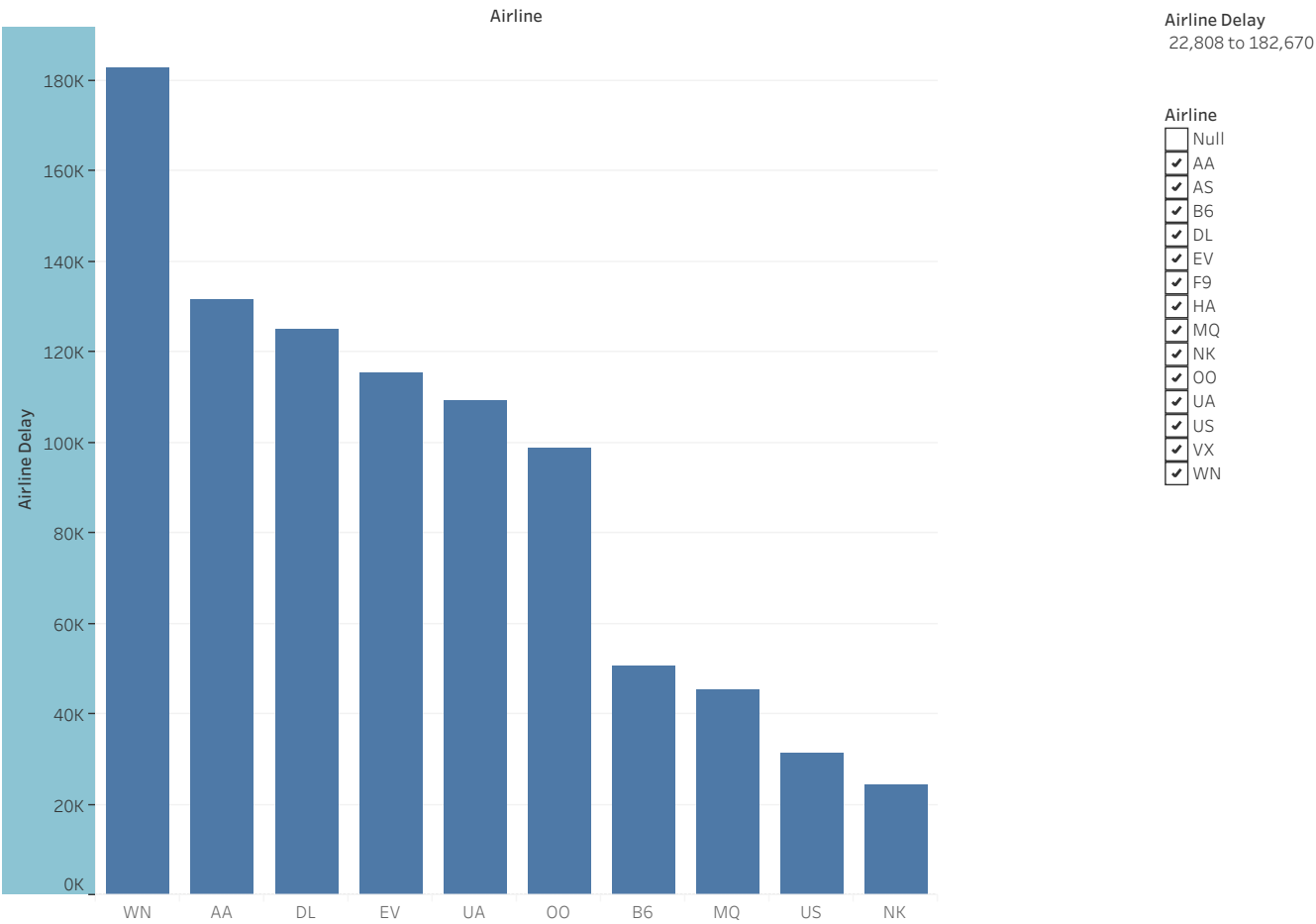
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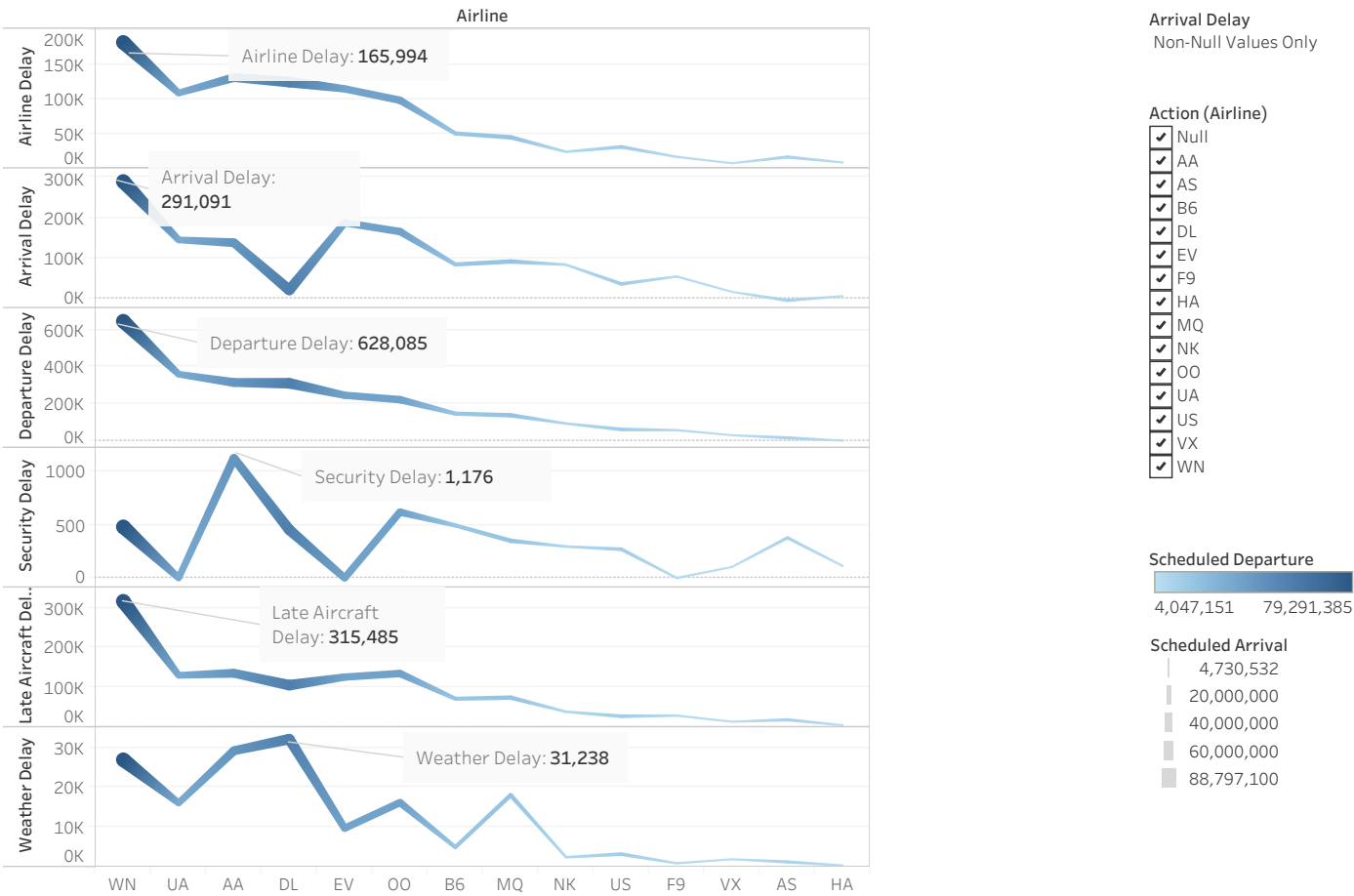
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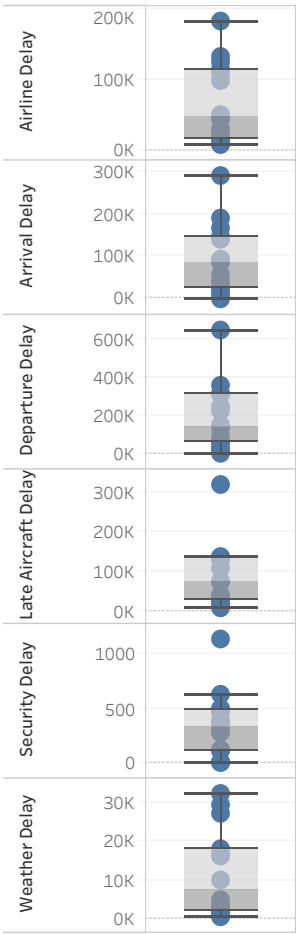
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- Airline
- ☐ Null
 - ☐ AA
 - ☐ AS
 - ☐ B6
 - ☐ DL
 - ☐ EV
 - ☐ F9
 - ☐ HA
 - ☐ MQ
 - ☐ NK
 - ☐ OO
 - ☐ UA
 - ☐ US
 - ☐ VX
 - ☐ WN

- Action (Airline)
- ☒ Null
 - ☒ AA
 - ☒ AS
 - ☒ B6
 - ☒ DL
 - ☒ EV
 - ☒ F9
 - ☒ HA
 - ☒ MQ
 - ☒ NK
 - ☒ OO
 - ☒ UA
 - ☒ US
 - ☒ VX
 - ☒ WN

Airline Delay
Non-Null Values Only

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