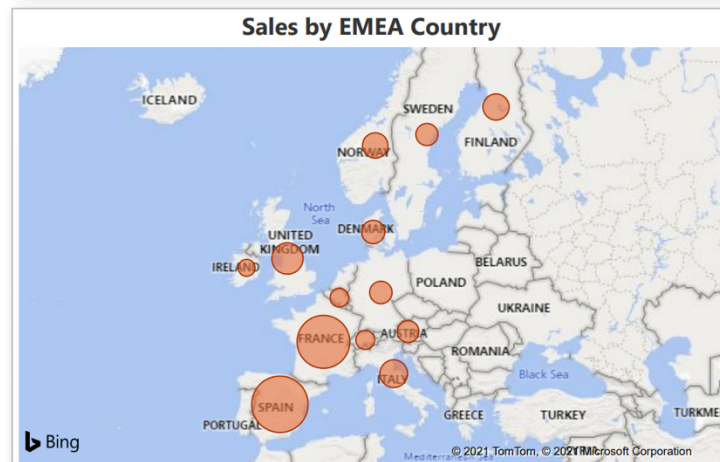
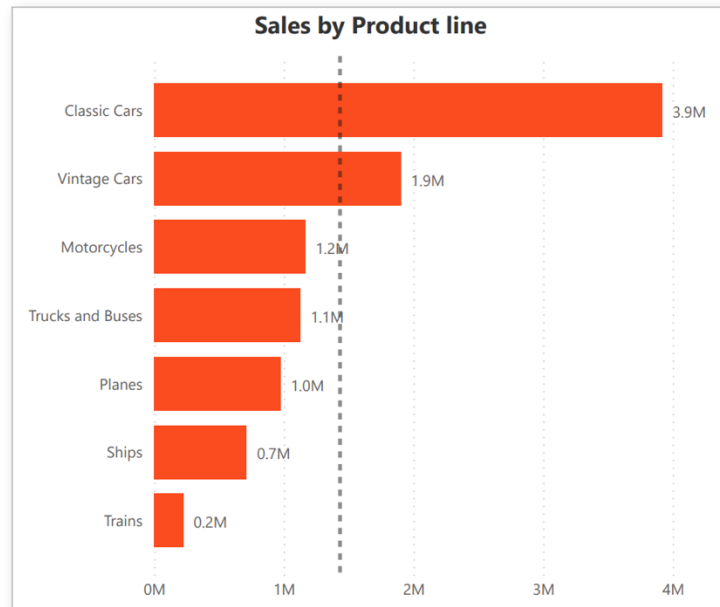


POWER BI ASSIGNMENT



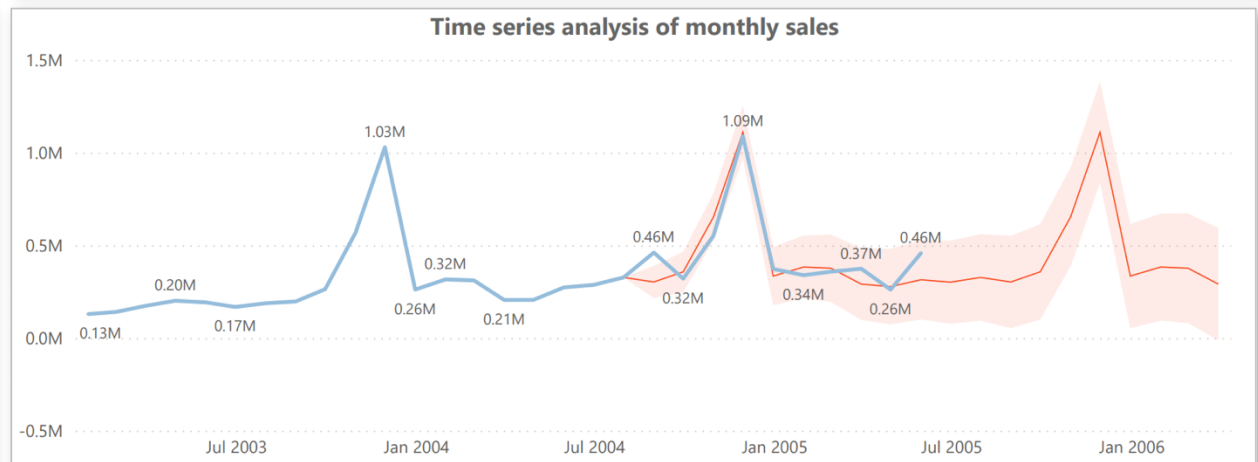
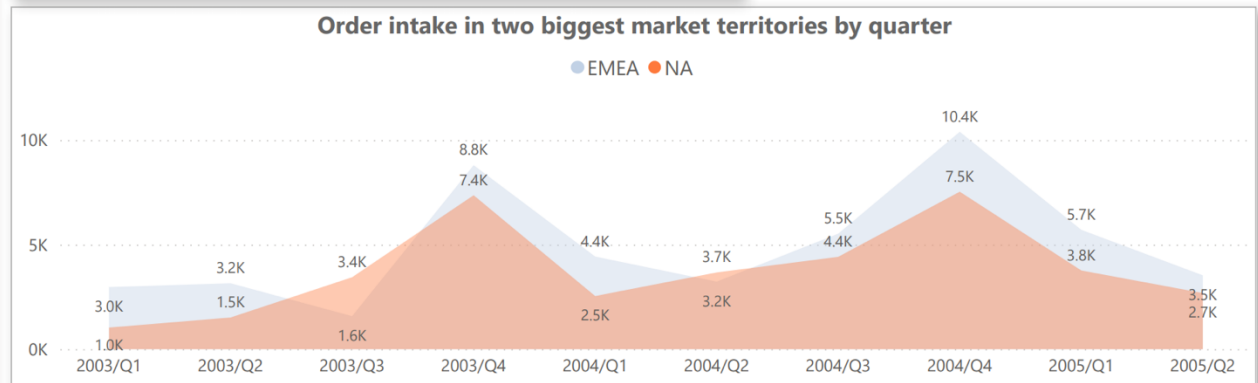
2003	2004	2005
------	------	------

10.03M	307	92
SALES	ORDERS	CUSTOMERS

DUONG DOAN (831622)

ABCAR SALES REPORT (2003-2005)

**Data from
www.kaggle.com/kyanyoga/sample-sales-data*



About the data

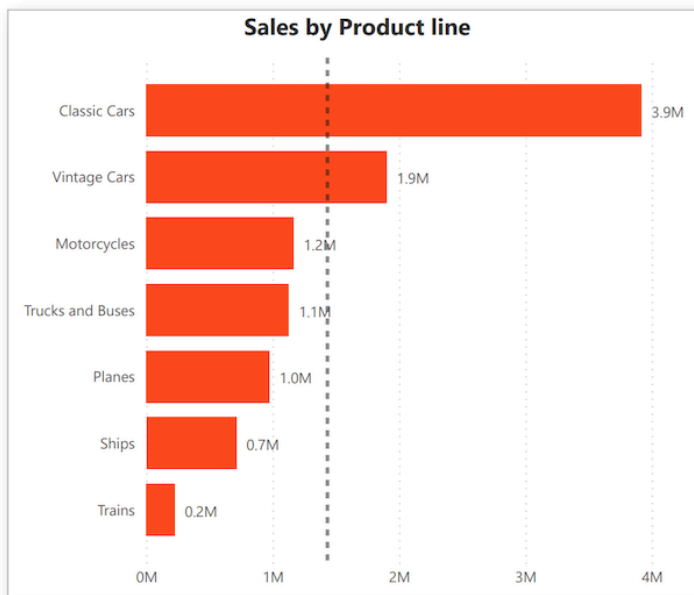
The report is generated from a sample sales database downloaded from <https://www.kaggle.com/kyanyoga/sample-sales-data>. The data is about the sales figures and other information related to the sold products (product lines, ordered quantity, order number, shipped status, etc.) of vehicles in more than 19 countries in 4 territories (NA, EMEA, APAC and Japan).

The data was downloaded and cleansed (e.g., changing date format, extracting date format to month and quarter, correcting the mistaken pricing data, etc.). The name of the company on the top right (ABCAR) was made up only to simulate the business report. The monetary currency was not mentioned in the original data, so I assume that euros (€) was used.

The biggest challenge in cleansing data is to handle the date format. As I wanted to use different time period for different charts (quarterly, monthly), it is essential to extract the original date format (DD-MM-YYYY) into different date formats.

Explaining the visuals

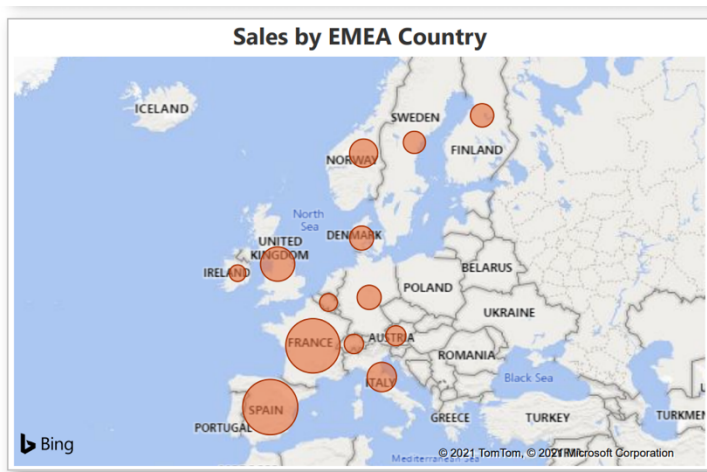
The clustered column chart



The clustered column chart is used to indicate the sales revenues by Product line. As we could see from the chart, the most popular products are Cars (Classic and Vintage). The sales of Classic Cars and Vintage Cars are successively €3.9M and €1.9M, both of which are above the average sales of all products.

Other vehicle product lines sales are below average, ranging from €0.7 – €1.2M. Train is the product that generates the least sales, of €0.2M.

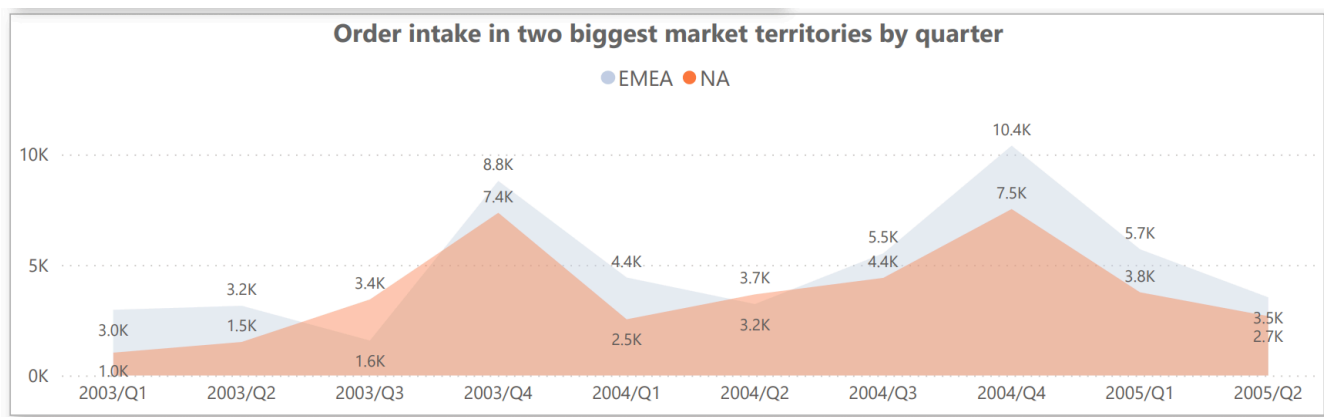
The map chart



The sales revenues of EMEA (European, the Middle East and Africa) countries are presented in the map chart. In the original data, there are other territories (e.g., North America, APAC and Japan). However, in this map, the territories were filtered so that it only showed the EMEA countries.

It is easy to see that France and Spain are two markets that generated the biggest sales revenues in this EMEA areas, while Ireland generated the least.

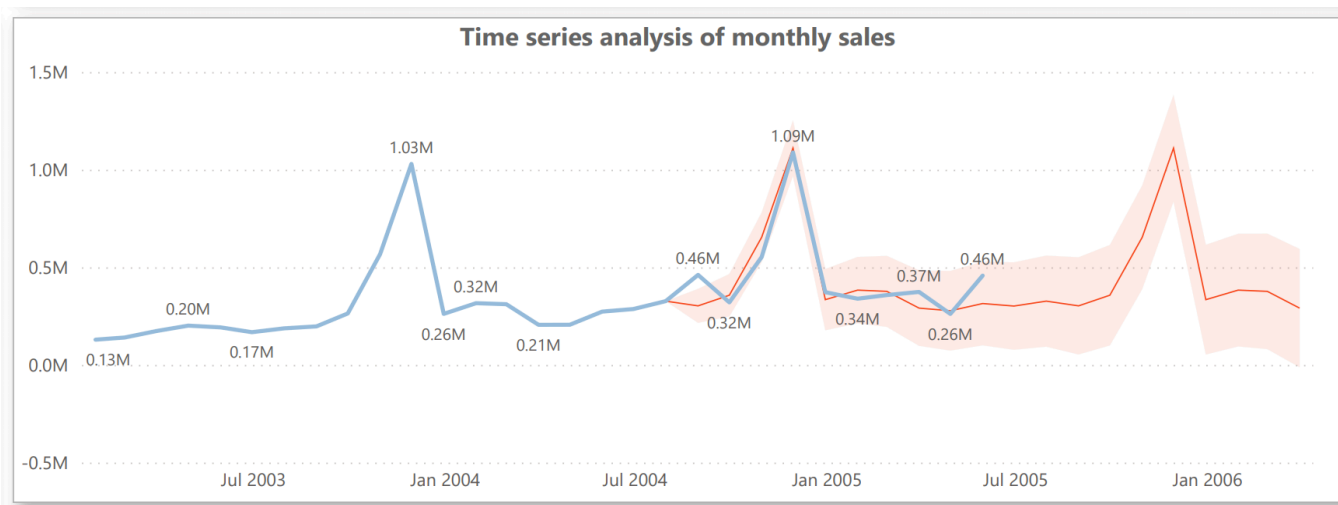
The area chart



The area chart is used to compare the order intake (total quantity of ordered vehicles) in the two biggest market territories: EMEA and North America (NA). There are other territories as mentioned above (Japan and APAC), but the market sizes are relatively small.

In general, the order intake from both areas got to their peaks around the fourth quarter each year. The highest order intake from EMEA and NA areas were successively 10 400 and 7 500 units, both in the fourth quarter 2004. The order intake from EMEA countries were usually larger than that in NA most of the time, except for around the third quarter in 2003 and the second quarter in 2004, in which ordered units from NA outnumbered those from EMEA area.

The analytics chart

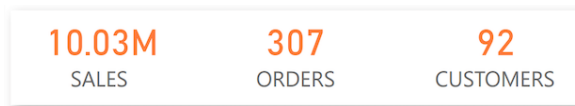


This analysis uses the line chart and the analytics feature to predict the monthly sales revenues of ABCAR in the next 10 months. The analytics used the monthly total sales figure as the input of the model. The confidentiality is set at 95% and the observed seasonality is around 1 year (12 months). The blue line reflects the real data, and the red line represents the prediction.

During 2003 and 2005, the sales did not fluctuate much from the beginning of the year until August, but starting from September the sales started to spike, reaching its peak at approximately €1M around November before dropping dramatically. The model predicted that the future sales would follow the pattern: stable from January to August 2005, then starting to rise in September, reaching its peak at about €1.1M in November and immediately dropping to €0.3M in January 2006.

The analytics was set to ignore 10 data points (10 months, from August 2004 to May 2005) to compare the prediction and the reality. The model prediction was quite precise when being compared to the real data.

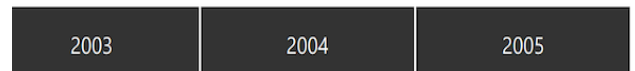
The card(s)



The card(s) are used for simple data such as total sales, total orders and customers. The data is calculated either with the Sum (Total sales) or Count (number of orders, or number of customers) function.

I added 2 more cards for more information and better layout of the report.

The slicer



The slicer is generated as a shortcut for filtering or narrowing down the dataset. In this sales report, a year filter is generated to view relevant data in certain years. The view on other charts will change accordingly when the year item on the slicer is chosen or not chosen. The demo of how the data change accordingly is presented below.

The below screenshot captures the view on the sales report for 2003 – 2004 period, where the year slicer is in use. We could see that all charts have changed accordingly to reflect only the sales-related data in the year of 2003 and 2004.

