I-First Part:

1) Having fun manipulating data is essential to make progress in the domain. Also, what makes someone feels great than making correct insights!

2) Supervised learning allows you to collect data or produce a data output from the previous experience. Adding to that, it helps you to optimize performance criteria using **experience**

Meanwhile, unsupervised machine learning finds all kind of unknown patterns in data. Moreover, its methods help you to find features which can be useful for categorization.

3) Artificial intelligence is a very wide term with applications ranging from robotics to text analysis.

Being the only real artificial intelligence with some applications in real-world problems, machine learning is a subset of AI that focuses on a narrow range of activities.

Data science isn't exactly a subset of machine learning but it uses ML to analyze data and make predictions about the future.

I quote "It combines machine learning with other disciplines like big data analytics and cloud computing. Data science is a practical application of machine learning with a complete focus on solving real-world problems."

4) As a great data scientist as mentionned in before,I know that my data can't be perfect. Thus I'll start with cleaning data and calibrate it. Then, with some help of machine learning algorithmes,I'll process my data and for sureI'll make some combinations between them for better results. Finally, I'll extract some insights from the process spoken of above.Without forgetting that a good data scientist must make his insights in a form of presentation to convince and/or clear his point of vue.

II- Second Part:

I'll start with deleting the Member_number column because the id don't help at all in the process to come. The I'll extract from the date 3 subcolumns: day, month and year to make a chart and try to get some informations about the distribution of data per each one of them. All this work aims to know which products are purchased the most in each periode so the store provides the quantity in need. Furthermore, the store may put the most wanted products as far as possible from the doors, so the client pass by the rest of products and see

discounts on them. As a result, the store may gain more profits and sells more products. Thank you data science!