Statement of Purpose

First thing that comes to mind when Machine Learning or AI is said is J.A.R.V.I.S for me. I was pulled into this topic and gradually started exploring it. As of now I am planning to build a more reliable sentiment analyser by means of using some basic NLP techniques and also an image recognizer - (Shape, isFace).

Till now I have been able to learn about making Linear Regression model, and a Logistic Regression model which are my work. I also learnt about making a basic sentiment analyser but I don't have it as a separate file as it is from Verzeo workshop and not fully my work.

Coming to my above two experiences:

1) Linear Regression: What have I understood about this?

In linear regression we consider that there is one dependent variable(y) and the rest are independent(xi).

y = a0.1 + a1.x1 + a2.x2 + ... + an.xn

Each of x1, x2, .., xn are features that the variable to be predicted depends on. The coefficients significance can be explained with an example: Let the Regression be done for Sales of a product through Ads from TV(x1), Newspaper(x2), Radio(x3). We have three independent features and Sales that depend on them. After applying Linear Regression on them we will get to know their weights independently. Let us say that TV(a1) is the highest, then it would mean TV Ads were quite effective and that would be given better focus to promote Sales. The same technique can also be used to determine Temperature for a given place, Price of automobiles or houses and so on.

2) Logistic Regression:

In logistic regression we classify the inputs into categories are groups that they are expected to be in. For this to be achieved a sigmoid function(1/(1+e^-x) and any such function is used along with some linear regression internally. This is one of the strategies that are used.

These techniques can be used to find the chances of a customer visiting again in the case of a shop; whether the patient has chances of diabetes or not and so on.

[Further explanation of projects are given in the respective projects.]

Both of the above come under Supervised Learning. This style of Machine Learning has labelled data to be fed as input. In a way we can say that Linear regression is a Classification but with infinitely long set of outputs to chose from whereas classification generally deals with finite set of outcomes.

ex: For fun

1)Q: How many marks will I get in coming Test?

or What are the chances of her/he becoming my friend?

A: Can be done with Linear Regression if data is given. Data can be previous test scores or replies each with some points based on no. of informal words relating to friendship.

2) Q: What grades will I get in the upcoming Test?

or Can her/he become my friend?

A: Can be done with Logistic Regression if data is given. Data can be previous test scores(and outcomes are finite) or replies each with some points based on no. of informal words relating to friendship (outcome is Friend or not friend).

I still have a long way to go and would like to enjoy the journey ahead.