Machine_learning

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[ ]:
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#a computer prog is said to learn from experience E with respect to task t and␣
 ↪with some performance measure p, if its performance p on task t,as measured␣
 ↪by p, will improve with experince E

#model should be trained very good to get the desired result,

#ML has two diff techniques
#Supervised Learning: training the model with labels,output(label Data), we␣
 ↪give both input and output to train the model
#UnSupervised Learning: training the model without output(label Data), we give␣
 ↪only input to train the model, model will automatically group the data into ␣
 ↪different groups based on the feature(clustering algoritm)


#Supervised Learning:
#1) Regression--------> if output is **continous** it is regression.eg: what␣
 ↪will be the temp tmrw
#2) Classification----> if output is **categorical** use classification.eg:␣
 ↪will it be hot or cold tmrw

#Supervised Learning:
#1)Clustering Algorithm---->Grouping based on input features


#Steps to follow while building any machine learning model:

#1)Complete the Exploratory Data Analysis(EDA)(Data wrangling)
#2)Understand the problem statement(prob is supervised or unsupervised)
#3)Identify the target variable(Output Variable)
#4)Seperate input and output features
#5)Split the data for training and testing(always training data should be more)␣
 ↪can be 70 30 or 80 20
#6)Build the ML Model
#7) Training/Fitting the model
#8)Test the model with test data
#9)Evaluate the model
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#Regression: Fiiting the Best line possible which is passing through as many␣
 ↪data points as possible in such a way that the error is less(Sum of error in␣
 ↪datapoints should be very less)
#sum of error could be misleading some times for eg: error1=5 and error2=-5␣
 ↪sum(error)=0 but the model is not good.
#therefore we use sum of squared error for above eg the metrics is  50 the␣
 ↪error is enlarged but error is large
#so we use mean squred error metric=50/2=25 but still it is high
#***so we finally use "root of mean squared error"=+/-5 ------used as␣
 ↪evaluation metrics***
#Linear Regression: math--->y=mx+c(general line equation)
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