Experiment No: 5

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	Aim: Implement Decision tree docsification
	algorithm
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	Theory into me to sant a do mad all of
	a moise of about Jose of setting of along
	Decicion treed are very strong and most
	editable tools for clairs Fration, and pradiction.
001	The attractiveness of decision tree is due
	to the Fact that pin contrast to neural
dos	networks by decision tree represent wites.
	Rules are represented using linguistic variable
70	so that souser interpretability may be achieved.
<i>o</i> *∂.\ _€	By comparing with a records with the miles one
144	can easily find a particular contegory to which
	a their recorded belonged to some mount
- 7	- Decision atreet methodrise it mainly used for the
11.	- tacks that possess the following properties:
	decision nodes and lens nodes.
. ()	i) The facks or the emblems in which the
	records the are represented by attribute-
	value pairs.
	ii) An application where the danget function
	takes three values as hot, mild, and cold
	rox or discret a output a value. I and put
16:	mi) The tasks or problems where the books
- (addinguent is the girinotive decisibtor.
aldologi	The training data may to be incomplete.
	as there are missing attailbute values
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.: Decision and tream sepresentation : militario - Decision tree is a classifier which is represented In the form of a tree of nicture where each node is either a leaf node or decision node. soleaf node represents the value of intarget dailoi or bresponice disattabute afortexamples. subti Declaron' node represents to somet test to be in reactied bout son a single attribute value, with ones boanche and issub tree for each - Rulec object picke fortegrapion silve techo solu? berido Decición Hilas o generales relegradación of or and a classification modelar in the proforming of a tree doctor of structure. roboid non o baid ulions non - Decision tree divides and dataset into smaller at of bedbsetsinoith intertace. In depth ook tore ? 2014 atthe finallor decision or tree to it a store coith decision nodes and leaf node. i) The focks or the problems in which the studiation poi bahara Buying parce and about han han hill tool so who wants so tot Lug book Acceptable 5 Safety Small of out- bolder and direct on a towly and thing h Unacceptable i Acceptable of of Winaceptable Acceptable





A decision node leig., buying-price) has two or more branches leig :, High, Medium & Low) - Leaf node shows a classification or decision. The topmost decision node in a tree which represents the best predictor is called rategorical as well as numerical data Gini Index: - All attributes are agamed to be continuous - It is assumed that there exist several possible split values for each attribute.

Gini index method can be modified for categorical attributer. - Gini Index is used in CART. n classes, gini index gini (T) is defined as-Gini(T) = 1 - \frac{\frac}\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fra To the above equation to represents the relative frequency of class in T.