Bhujbal Knowledge City Institute of Technology- Polytechnic Adgaon, Nashik- 422 003.

	Augaon, Nashik- 422 003. Date:
	Realtical No. 10
	180(F(C)) 1VO . 1D
	To it is a supplied to the sup
\perp	Aim: To implement & evaluate the support tollare muchine
\perp	(SIM) (lussification digorithm on a diltabet waity
	17 4th on.
	file of the attitude a party when you have a comment of the
	Input: i) Doublet (Ilis)
	Input: i) Datutet (IIis) 2) Target: species of flower
B.710	output: 1 Acouracy
	ii) classification report
-	
1	The ory:
	Though .
	what is sum?
-	Support vector muchine (SVM) is a powerful expronled
	muchine leasing pimilusly used for classification
	tasks, though it can also be used for reglession
1	tasks, though it control of regions of
	separates classes in the feature space with the
11.	maximum mutgin.
	How does ithe work
1)	cum constant & hyperblune in a high-dimesional
	space which can be used for classification

	The hypupline is chown in such a way - that this musting
	is maximized.
3.	The neurest duty points from each class that influence due by perflue are collect support
	linear sym: used when duty is linearly separatis
	Non-lineur sym: when duta is not linearly sperute a higher-demensional space, who e it becomestly
	chehara ple
	Voca ols I CUMI.
	Keenels in SVM:
	Linear rernel- Good for lineaily separable data.
	Trolynomial keenel- useful for curved boundaries
- 8.	Polynomial Kernel- Useful for curved boundaries RBF / Grassian Kernel- Defalut Chaice, works well in most cases.
h,	sigmaid keenel- Similar to neural networks:
70,7	SIM Toppionisti.
	SVM Terninology:
	Hyperplune: necision houndary that separated signer
See The second	10.405.
2.	SUPPORT Vectors. Odla voice
dentity (in vision)	support Vectors: Data points that hie closet to the
3	muzgine. Pistunce between 1.
	the hyperplane between the Jupport. Vectors



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Adgaon, Nashik- 422 003. Date:

Algorithm:
Inguil Part /
[step 1]. : Stuet
[Step 2]: Import destatet & required vihasies
[Step 3]: Spit dututet into training & testing Hets.
(Step 4): choose on approprife Keenel
(Steps): nredict Using test data.
[steps]: Evoluate performace, using accuracy &
Clarification metrics.
Par marining,
Conclusion:
Village Control of the Control of th
The support vector machine (SVM) algorithm was
successfully implemented using the lais dututets
It classified the flower species with lov.
occuracy using the RBF Keenal

flow those : Load Datalet Split Into Train/ Train the model predict on Test Evaluate Accuracy & report