

IRIS CLASSIFICATION

Machine Learning Project

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OUTLINE

Iris classification problem involves predicting the species of Iris flowers based on their physical attributes. The goal is to develop a model that can accurately classify a new Iris flower based on features.

Some Steps are given below:

Data collection

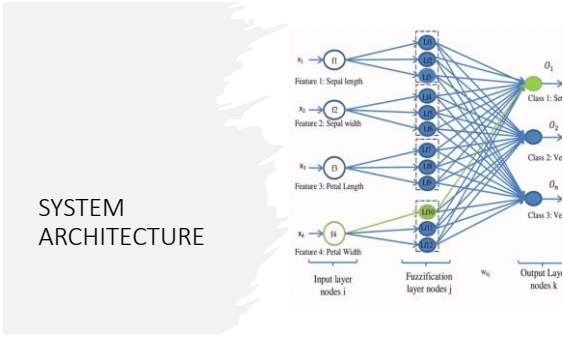
Data visualization

Model selection

Model training

Model evaluation

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DATA SETS

• STATE of Art data set

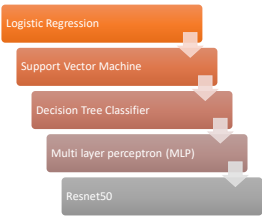
sepal length	sepal width	petal length	petal width	species
5.1	3.5	1.4	0.2	iris-setosa
5.9	3	1.4	0.2	iris-setosa
6.7	3.2	1.5	0.2	iris-setosa
-	-	-	-	-
-	-	-	-	iris-virginica
6.5	3.4	1.4	0.2	iris-virginica
5.8	3	1.5	1.8	iris-virginica

• Custom dataset

Petal length	Petal breadth	Petal Area	sepal Area	Origin	Color	species
1.4	5.1	0.28	17.85	South Asia	Blue	iris-setosa
1.4	4.9	0.28	14.7	South Asia	Blue	iris-setosa
1.1	4.7	0.26	15.04	South Asia	Blue	iris-setosa
-	-	-	-	-	-	-
-	-	-	-	-	-	-
1.6	6.2	12.42	21.08	Canada	Blue	iris-virginica
1.1	5.9	9.18	17.7	Canada	Blue	iris-virginica

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Models



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Accuracy from Different Models:

Accuracy	Logistic-Regression	SVM	Decision Tree Classifier	MLP	Resnet50
state-of-art Dataset	96.66%	93.3%	98.33%	98.77	98.23%
custom-dataset	89.89%	92.5%	91%	91.3%	96%

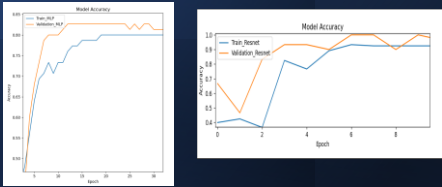
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Loss from Different Models

Loss	Resnet50	MLP
Test Loss of state-of-art Dataset	5.4%	17.89%
Test loss of Custom dataset	12%	19.4%

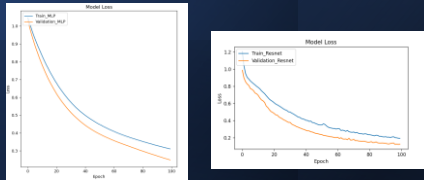
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Accuracy from Resnet and MLP

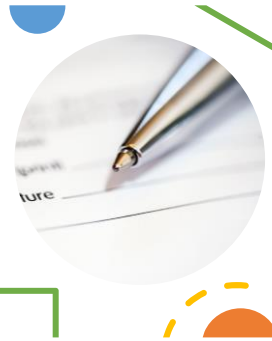


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Loss from Resnet and MLP



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Conclusion :

Resnet model performs better as it showing the better results than other models. Its giving 98% and 96% accuracy in state-of-art and custom dataset.

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