

# Iris Classification Using Support Vector Machine Algorithm





# Introduction

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The **Iris Species** dataset is a classic in machine learning. Using the Support Vector Machine algorithm, we aim to classify the *Iris species* based on sepal and petal measurements. This presentation will explore the process and results of this classification.





# Iris Dataset

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The **Iris dataset** contains 150 instances of iris flowers, each with four features: sepal length, sepal width, petal length, and petal width. These features will be used to classify the iris species. The dataset is commonly used for testing machine learning algorithms.





# Support Vector Machine

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The **Support Vector Machine (SVM)** is a powerful supervised learning algorithm used for classification. It works by finding the optimal hyperplane that best separates the data into different classes. SVM is effective in high-dimensional spaces and is versatile in handling various types of data.



# Data Preprocessing

Before applying the SVM algorithm, the **data** must be preprocessed. This involves standardizing the features, splitting the dataset into training and testing sets, and ensuring the data is ready for the classification process.

# Model Training

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The **SVM model** will be trained using the preprocessed data. The model will learn to classify the iris species based on the provided features. The training process aims to find the optimal hyperplane that maximizes the margin between different classes.





A collage of business charts and documents is positioned on the left side of the slide. It includes a bar chart with blue bars, a line graph with a red line, and a document with a table of data. The background is dark blue with large, light blue geometric shapes. 

# Model Evaluation

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After training, the **SVM model** will be evaluated using the testing set. The accuracy, precision, recall, and F1 score will be calculated to assess the model's performance in classifying the iris species. The evaluation results will provide insights into the model's effectiveness.

# Results and Analysis

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The classification results obtained from the **SVM model** will be analyzed to understand how well the model distinguishes between the different iris species. The analysis will provide valuable insights into the strengths and limitations of the classification process.





# Conclusion

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In conclusion, the **Support Vector Machine** algorithm has proven to be effective in classifying the *Iris species* based on the provided features. This presentation has demonstrated the process of using SVM for iris species classification and highlighted the significance of this approach in machine learning.

# Thanks!

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