# CSE713
# Pattern Recognition

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# Paper Title

# “Analysis of Bangla Transformation of Sentences using Machine Learning”

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# Table of Contents

# Introduction

- Introduce the topic of analysis of Bangla transformation of sentences using machine learning.
- Explain the significance of sentence pattern recognition in Bangla.
- Implementing pattern recognition in user-friendly applications.

# Objectives

- Develop a model that can identify and classify three types of sentence formations: Sorol Bakko, Jotil Bakko, and Jougik Bakko.
- Explain the importance of sentence identification in extracting information from Bangla texts.

# Dataset

- Describe the dataset used for training and testing the model.

| Sentence | TypeOfSentence |
|---|---|
| সন্ধ্যায় পাখিরা বাসায় ফেরে | সরল বাক্য |
| সন্ধ্যা হয় এবং পাখিরা বাসায় ফেরে | যৌগিক বাক্য |
| যখন সন্ধ্যা হয় তখন পাখিরা বাসায় ফেরে | জটিল বাক্য |
| দর্শক মাত্রই আশ্চর্য হয়েছে | সরল বাক্য |



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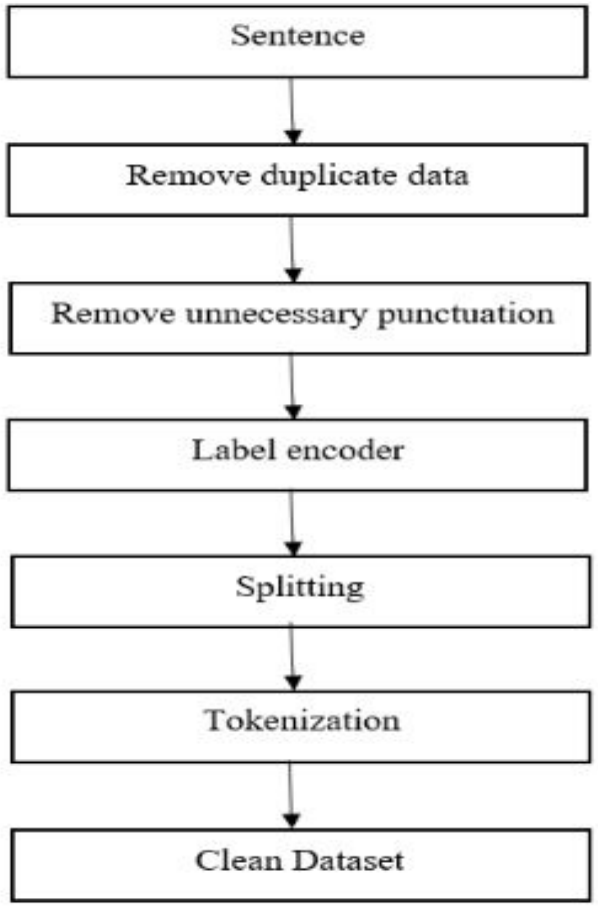
# Preprocessing

- Discuss the preprocessing steps applied to the dataset.



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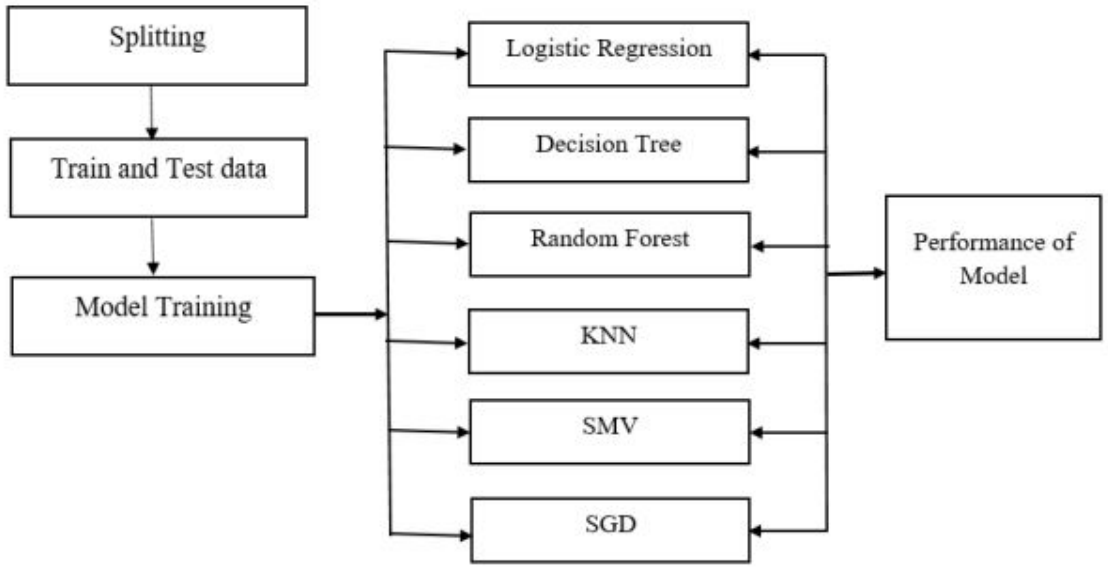
# Methodology

- Splitting.
- Model Training.
- Performance Evaluation.



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# Algorithms

- Introduce the machine learning algorithms used in the analysis.
    - Logistic Regression
    - Decision Tree
    - Random Forest
    - KNN
    - SVM
    - SGD
- Explain the rationale behind selecting these algorithms for the classification task.



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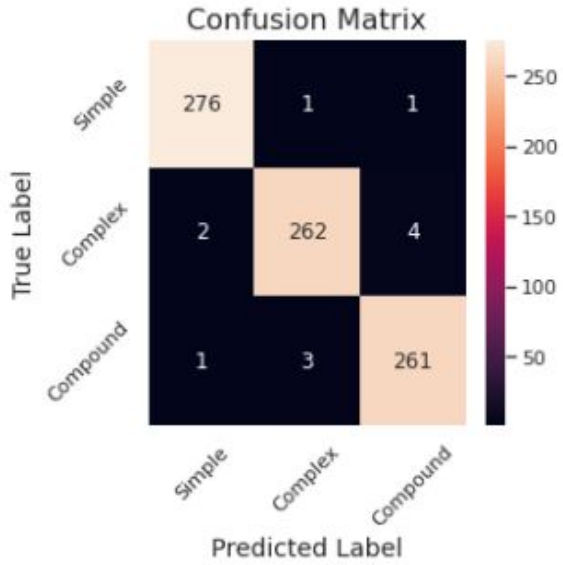
# Evaluation Metrics

- Present the evaluation metrics used to assess the model's performance.
- Discuss metrics.
- Show a confusion matrix to visualize the classification results.



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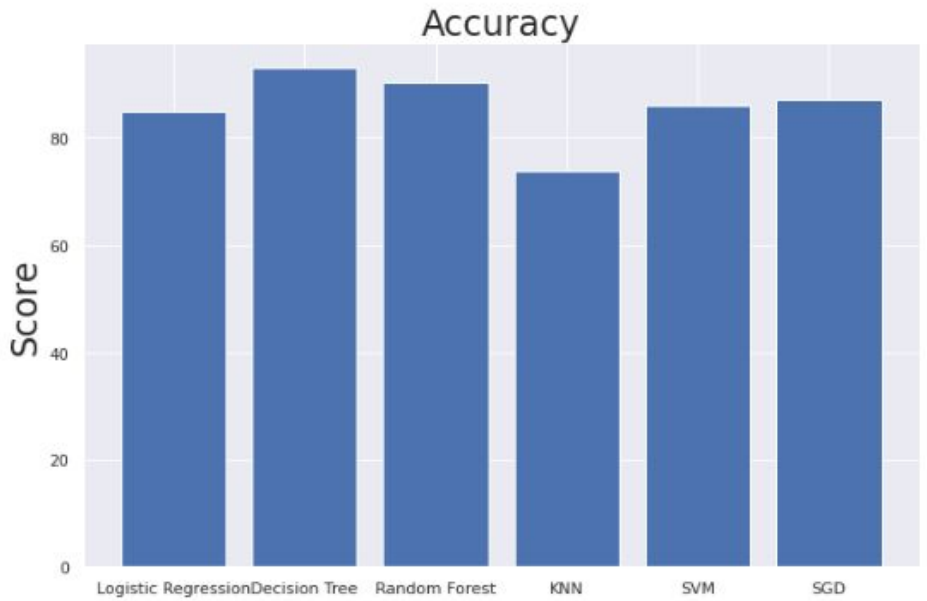
# Results

- Present the results obtained from the analysis.
- Compare the accuracy achieved by each machine learning algorithm.
- Highlight the best-performing algorithm and its corresponding accuracy.



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# Limitations

- Limited Dataset.
- Simplified Sentence Structure.
- Dependency on Machine Learning Algorithms.
- Lack of Comparative Analysis.



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# Future Work

- Utilize more precise stemming algorithms to create association rules.
- Explore different pruning techniques to improve classification accuracy.
- Develop user-friendly applications based on the proposed system.
- Expand the dataset to enhance accuracy.
- Apply Deep Learning techniques for improved system performance.



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# Conclusion

- Emphasize the importance of machine learning in Bangla sentence transformation analysis.
- Reinforce the potential applications and benefits of accurate sentence identification.
- Encourage further research and development in the field to improve existing models and explore new avenues.

# Bibliography


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# THANK YOU