

K-Nearest Neighbors Classification Study

Eduardo

April 23, 2025

1 Introduction

This document presents a study on the K-Nearest Neighbors (KNN) classification algorithm.

2 Methodology

Describe the methodology used in the study.

3 Results

Present the results obtained from the experiments.

dataset	samples	features	accuracy				
			nn-clas	1nn-clas	3nn-clas	5nn-clas	10nn-clas
Ionosphere	351	34	0.87 ± 0.05	0.85 ± 0.05	0.87 ± 0.04	0.87 ± 0.05	0.87 ± 0.05
Binary Digits	360	64	1.00 ± 0.00	0.52 ± 0.02	0.52 ± 0.02	0.52 ± 0.02	1.00 ± 0.00
Haberman	306	3	0.71 ± 0.07	0.68 ± 0.06	0.69 ± 0.07	0.69 ± 0.06	0.71 ± 0.07
Pima Diabetes	768	8	0.73 ± 0.05	0.52 ± 0.05	0.52 ± 0.05	0.52 ± 0.05	0.73 ± 0.05
Banknote	1372	4	1.00 ± 0.00	0.99 ± 0.01	0.99 ± 0.01	0.99 ± 0.01	1.00 ± 0.00
Sonar	208	60	0.77 ± 0.13	0.85 ± 0.07	0.83 ± 0.07	0.81 ± 0.08	0.77 ± 0.13
Breast Cancer	569	30	0.93 ± 0.03	0.39 ± 0.02	0.39 ± 0.02	0.39 ± 0.02	0.93 ± 0.03
SPECT Heart	349	44	0.70 ± 0.08	0.95 ± 0.03	0.95 ± 0.03	0.95 ± 0.03	0.70 ± 0.08

4 Conclusion

Summarize the findings and conclusions of the study.