KNN CLAS

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***Abstract*—**
***Index Terms*—**

I. Introduction

II. Methodology

III. Results

TABLE I
Dataset Metadata

Dataset	Samples	Features
Ionosphere	351	34
Binary Digits	360	64
Haberman	306	3
Pima Diabetes	768	8
Banknote	1372	4
Sonar	208	60
Breast Cancer	569	30
SPECT Heart	349	44

TABLE II
Model Accuracy Comparison

Dataset	Accuracy			
	nn	1nn	3nn	5nn
Ionosphere	0.87	0.85	0.87	0.87
Binary Digits	1.00	0.52	0.52	0.52
Haberman	0.71	0.68	0.69	0.69
Pima Diabetes	0.73	0.52	0.52	0.52
Banknote	1.00	0.99	0.99	0.99
Sonar	0.77	0.85	0.83	0.81
Breast Cancer	0.93	0.39	0.39	0.39
SPECT Heart	0.70	0.95	0.95	0.95

TABLE III
Training and Prediction Times

Dataset	Training (ms)		Prediction (ms)			
	nn	knn	nn	1nn	3nn	5nn
Ionosphere	73.20	26.80	2.20	2.90	2.80	3.00
Binary Digits	241.40	90.40	3.00	3.00	3.10	3.10
Haberman	16.70	8.70	2.00	2.90	2.60	2.90
Pima Diabetes	82.00	31.30	2.20	4.90	4.30	4.90
Banknote	297.00	50.60	2.90	3.10	3.40	3.00
Sonar	68.00	30.20	2.50	3.00	2.90	3.00
Breast Cancer	66.70	14.30	2.10	3.00	2.90	2.80
SPECT Heart	192.00	75.00	2.60	2.90	2.90	3.00

TABLE IV
Support Samples Count

Dataset	Support Samples	
	nn	knn
Ionosphere	101	252
Binary Digits	131	267
Haberman	54	223
Pima Diabetes	113	594
Banknote	159	179
Sonar	143	186
Breast Cancer	8	122
SPECT Heart	98	275

IV. Discussion

Acknowledgment

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