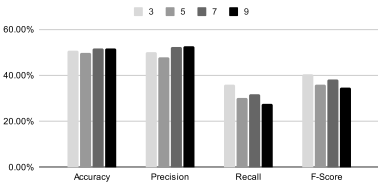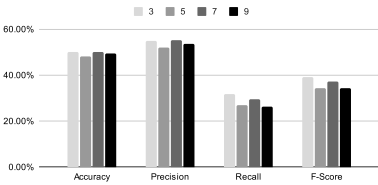## Average Test Results For Whole Model

Accuracy	Precision	Recall	F-Score	Classification Confusion Matrix (%)				Per Period Confusion Matrix (%)		
50.25%	52.39%	30.00%	36.81%		Actual Pos	Actual Neg			Actual Pos	Actual Neg
				Predicted Pos	14.56%	14.51%	Predicted Pos		22.45%	21.93%
				Predicted Neg	35.24%	35.69%	Predicted Neg		27.79%	27.82%

Average Test Results per Sex and K-Value

Sex	K-Value	Accuracy	Precision	Recall	F-Score	Classification Confusion Matrix (%)				Per Period Confusion Matrix (%)		
Female	3	50.85%	50.25%	35.88%	40.52%		Actual Pos	Actual Neg			Actual Pos	Actual Neg
						Predicted Pos	16.76%	17.90%	Predicted Pos		22.02%	23.28%
						Predicted Neg	31.25%	34.10%	Predicted Neg		26.01%	28.70%
	5	49.76%	48.02%	30.18%	35.86%		Actual Pos	Actual Neg			Actual Pos	Actual Neg
						Predicted Pos	14.07%	16.30%	Predicted Pos		21.78%	23.06%
						Predicted Neg	33.94%	35.69%	Predicted Neg		26.24%	28.91%
	7	51.80%	52.41%	31.74%	38.17%		Actual Pos	Actual Neg			Actual Pos	Actual Neg
						Predicted Pos	14.93%	15.13%	Predicted Pos		21.74%	22.98%
						Predicted Neg	33.07%	36.87%	Predicted Neg		26.29%	29.00%
	9	51.70%	52.68%	27.51%	34.69%		Actual Pos	Actual Neg			Actual Pos	Actual Neg
						Predicted Pos	12.86%	13.16%	Predicted Pos		21.61%	23.12%
						Predicted Neg	35.14%	38.84%	Predicted Neg		26.41%	28.86%
Male	3	50.05%	54.80%	31.83%	39.24%		Actual Pos	Actual Neg			Actual Pos	Actual Neg
						Predicted Pos	16.27%	14.63%	Predicted Pos		23.15%	20.57%
						Predicted Neg	36.32%	33.78%	Predicted Neg		29.31%	26.97%
	5	48.32%	51.95%	27.03%	34.52%		Actual Pos	Actual Neg			Actual Pos	Actual Neg
						Predicted Pos	13.63%	13.73%	Predicted Pos		22.92%	20.73%
						Predicted Neg	37.95%	34.68%	Predicted Neg		29.54%	26.81%
	7	50.21%	55.34%	29.43%	37.25%		Actual Pos	Actual Neg			Actual Pos	Actual Neg
						Predicted Pos	14.78%	12.99%	Predicted Pos		23.18%	20.87%
						Predicted Neg	36.81%	35.43%	Predicted Neg		29.28%	26.67%
	9	49.34%	53.65%	26.37%	34.20%		Actual Pos	Actual Neg			Actual Pos	Actual Neg
						Predicted Pos	13.18%	12.25%	Predicted Pos		23.22%	20.87%
						Predicted Neg	38.41%	36.16%	Predicted Neg		29.25%	26.66%

Average Test Results for Female Patients per K-Value (■ 3 ■ 5 ■ 7 ■ 9)

Average Test Results for Male Patients per K-Value (■ 3 ■ 5 ■ 7 ■ 9)

Dataset Cleaning / Testing

Female – Patient 1
Valid Patient Files: 304; Patient Files after Bias: 279; Test Patient Number: 41; Training Patient Number: 238; Training Audio Number: 823

Quantities For Full Audio — Abnormal: Present 113 / Absent 240; Normal: Present 16 / Absent 453; Categorised for Classifier: Present 369 / Absent 453

Quantities For Period Audio — Abnormal: Present 1706 / Absent 3422; Normal: Present 203 / Absent 6036; Categorised for Classifier: Present 5331 / Absent 6036

K-Value	Accuracy	Precision	Recall	F-Score	Class. Num Pos	Class. Num Neg	Class. % Pos	Class. % Neg	Period Num Pos	Period Num Neg	Period % Pos	Period % Neg
3	45.95%	49.06%	32.91%	39.39%	PP 26 / 27	PN 53 / 42	PP 17.57% / 18.24%	PN 35.81% / 28.38%	PP 1217 / 1027	PN 1438 / 1220	PP 24.83% / 20.95%	PN 29.33% / 24.89%
5	45.95%	48.65%	22.78%	31.03%	PP 18 / 19	PN 61 / 50	PP 12.16% / 12.84%	PN 41.22% / 33.78%	PP 2001 / 1661	PN 2424 / 2084	PP 24.49% / 20.33%	PN 29.67% / 25.51%
7	52.70%	62.16%	29.11%	39.66%	PP 23 / 14	PN 56 / 55	PP 15.54% / 9.46%	PN 37.84% / 37.16%	PP 2814 / 2291	PN 3381 / 2952	PP 24.60% / 20.03%	PN 29.56% / 25.81%
9	50.68%	58.33%	26.58%	36.52%	PP 21 / 15	PN 58 / 54	PP 14.19% / 10.14%	PN 39.19% / 36.49%	PP 3613 / 2961	PN 4352 / 3780	PP 24.57% / 20.13%	PN 29.59% / 25.70%

Female – Patient 2
Valid Patient Files: 304; Patient Files after Bias: 289; Test Patient Number: 43; Training Patient Number: 246; Training Audio Number: 857

Quantities For Full Audio — Abnormal: Present 123 / Absent 262; Normal: Present 19 / Absent 452; Categorised for Classifier: Present 404 / Absent 452

Quantities For Period Audio — Abnormal: Present 1729 / Absent 3686; Normal: Present 257 / Absent 6094; Categorised for Classifier: Present 5672 / Absent 6094

K-Value	Accuracy	Precision	Recall	F-Score	Class. Num Pos	Class. Num Neg	Class. % Pos	Class. % Neg	Period Num Pos	Period Num Neg	Period % Pos	Period % Neg
3	49.65%	50.00%	30.99%	38.26%	PP 22 / 22	PN 49 / 48	PP 15.60% / 15.60%	PN 34.75% / 34.04%	PP 1025 / 943	PN 1156 / 1211	PP 23.64% / 21.75%	PN 26.67% / 27.94%
5	47.52%	46.34%	26.76%	33.93%	PP 19 / 22	PN 52 / 48	PP 13.48% / 15.60%	PN 36.88% / 34.04%	PP 1665 / 1579	PN 1970 / 2011	PP 23.04% / 21.85%	PN 27.27% / 27.83%
7	53.90%	56.52%	36.62%	44.44%	PP 26 / 20	PN 45 / 50	PP 18.44% / 14.18%	PN 31.91% / 35.46%	PP 2307 / 2212	PN 2782 / 2814	PP 22.81% / 21.87%	PN 27.50% / 27.82%
9	51.06%	52.94%	25.35%	34.29%	PP 18 / 16	PN 53 / 54	PP 12.77% / 11.35%	PN 37.59% / 38.30%	PP 2969 / 2838	PN 3574 / 3624	PP 22.83% / 21.82%	PN 27.48% / 27.87%

Female – Patient 3
Valid Patient Files: 304; Patient Files after Bias: 281; Test Patient Number: 53; Training Patient Number: 228; Training Audio Number: 793

Quantities For Full Audio — Abnormal: Present 109 / Absent 219; Normal: Present 14 / Absent 450; Categorised for Classifier: Present 342 / Absent 450

Quantities For Period Audio — Abnormal: Present 1530 / Absent 3060; Normal: Present 186 / Absent 6059; Categorised for Classifier: Present 4776 / Absent 6059

K-Value	Accuracy	Precision	Recall	F-Score	Class. Num Pos	Class. Num Neg	Class. % Pos	Class. % Neg	Period Num Pos	Period Num Neg	Period % Pos	Period % Neg
3	50.54%	72.00%	31.58%	43.90%	PP 36 / 14	PN 78 / 58	PP 19.35% / 7.53%	PN 41.94% / 31.18%	PP 1558 / 944	PN 2084 / 1366	PP 26.18% / 15.86%	PN 35.01% / 22.95%
5	47.85%	68.09%	28.07%	39.75%	PP 32 / 15	PN 82 / 57	PP 17.20% / 8.06%	PN 44.09% / 30.65%	PP 2609 / 1546	PN 3461 / 2304	PP 26.30% / 15.58%	PN 34.89% / 23.23%
7	46.77%	68.29%	24.56%	36.13%	PP 28 / 13	PN 86 / 59	PP 15.05% / 6.99%	PN 46.24% / 31.72%	PP 3607 / 2142	PN 4891 / 3248	PP 25.97% / 15.42%	PN 35.22% / 23.39%
9	46.77%	74.19%	20.18%	31.72%	PP 23 / 8	PN 91 / 64	PP 12.37% / 4.30%	PN 48.92% / 34.41%	PP 4605 / 2766	PN 6321 / 4164	PP 25.79% / 15.49%	PN 35.40% / 23.32%

Female – Patient 4
Valid Patient Files: 304; Patient Files after Bias: 288; Test Patient Number: 47; Training Patient Number: 241; Training Audio Number: 833

Quantities For Full Audio — Abnormal: Present 140 / Absent 251; Normal: Present 14 / Absent 427; Categorised for Classifier: Present 405 / Absent 427

Quantities For Period Audio — Abnormal: Present 1929 / Absent 3464; Normal: Present 204 / Absent 5756; Categorised for Classifier: Present 5597 / Absent 5756

K-Value	Accuracy	Precision	Recall	F-Score	Class. Num Pos	Class. Num Neg	Class. % Pos	Class. % Neg	Period Num Pos	Period Num Neg	Period % Pos	Period % Neg
3	56.25%	45.45%	38.46%	41.67%	PP 25 / 30	PN 40 / 65	PP 15.63% / 18.75%	PN 25.00% / 40.63%	PP 907 / 1343	PN 1022 / 1714	PP 18.19% / 26.94%	PN 20.50% / 34.38%
5	56.25%	45.28%	36.92%	40.68%	PP 24 / 29	PN 41 / 66	PP 15.00% / 18.13%	PN 25.63% / 41.25%	PP 1505 / 2250	PN 1710 / 2845	PP 18.11% / 27.08%	PN 20.58% / 34.24%
7	56.88%	45.83%	33.85%	38.94%	PP 22 / 26	PN 43 / 69	PP 13.75% / 16.25%	PN 26.88% / 43.13%	PP 2114 / 3150	PN 2387 / 3983	PP 18.17% / 27.08%	PN 20.52% / 34.24%
9	60.63%	52.00%	40.00%	45.22%	PP 26 / 24	PN 39 / 71	PP 16.25% / 15.00%	PN 24.38% / 44.38%	PP 2714 / 4112	PN 3073 / 5059	PP 18.14% / 27.49%	PN 20.54% / 33.82%

Female – Patient 5
Valid Patient Files: 304; Patient Files after Bias: 292; Test Patient Number: 47; Training Patient Number: 245; Training Audio Number: 855

Quantities For Full Audio — Abnormal: Present 150 / Absent 270; Normal: Present 17 / Absent 417; Categorised for Classifier: Present 437 / Absent 417

Quantities For Period Audio — Abnormal: Present 2116 / Absent 3712; Normal: Present 219 / Absent 5638; Categorised for Classifier: Present 6047 / Absent 5638

K-Value	Accuracy	Precision	Recall	F-Score	Class. Num Pos	Class. Num Neg	Class. % Pos	Class. % Neg	Period Num Pos	Period Num Neg	Period % Pos	Period % Neg
3	51.88%	34.72%	45.45%	39.37%	PP 25 / 47	PN 30 / 58	PP 15.63% / 29.38%	PN 18.75% / 36.25%	PP 875 / 1668	PN 940 / 1693	PP 17.24% / 30.89%	PN 18.52% / 33.35%
5	51.25%	31.75%	36.36%	33.90%	PP 20 / 43	PN 35 / 62	PP 12.50% / 26.88%	PN 21.88% / 38.75%	PP 1433 / 2578	PN 1592 / 2857	PP 16.94% / 30.47%	PN 18.82% / 33.77%
7	48.75%	29.23%	34.55%	31.67%	PP 19 / 46	PN 36 / 59	PP 11.88% / 28.75%	PN 22.50% / 36.88%	PP 2028 / 3613	PN 2207 / 3996	PP 17.12% / 30.50%	PN 18.63% / 33.74%
9	49.38%	25.93%	25.45%	25.69%	PP 14 / 40	PN 41 / 65	PP 8.75% / 25.00%	PN 25.63% / 40.63%	PP 2549 / 4668	PN 2896 / 5115	PP 16.74% / 30.65%	PN 19.02% / 33.59%

Dataset Cleaning

Sex	Number	Valid Patient Files	Patient Files after Bias	Test Patient Number	Training Patient Number	Training Audio Number	Category	Full Audio Present	Full Audio Absent	Period Audio Present	Period Audio Absent
Male	1	322	322	46	276	964	Abnormal	128	316	1824	4560
							Normal	35	484	591	6857
							Categorised for Classifier	479	484	6975	6857
	2	322	322	60	262	898	Abnormal	110	285	1634	4115
							Normal	26	476	456	6736
							Categorised for Classifier	421	476	6205	6736
	3	322	322	46	276	960	Abnormal	134	315	1928	4565
							Normal	36	474	591	6776
							Categorised for Classifier	485	474	7084	6776
	4	322	322	56	266	926	Abnormal	109	293	1665	4275
							Normal	26	497	443	7030
							Categorised for Classifier	428	497	6383	7030
	5	322	322	60	262	898	Abnormal	110	285	1634	4115
							Normal	26	476	456	6736
							Categorised for Classifier	421	476	6205	6736

Testing

Number	K-Value	Accuracy	Precision	Recall	F-Score	Predicted	Class. Conf. Matrix (Num) Actual Pos	Actual Neg	Class. Conf. Matrix (%) Actual Pos	Actual Neg	Per Period Conf. (Num) Actual Pos	Actual Neg	Per Period Conf. (%) Actual Pos	Actual Neg
1	3	50.00%	42.19%	39.13%	40.80%	Predicted Pos	27	37	17.09%	23.42%	1112	1304	21.88%	25.66%
						Predicted Neg	52	42	32.91%	26.58%	1141	1525	22.45%	30.01%
	5	48.73%	39.29%	31.88%	35.20%	Predicted Pos	22	34	13.92%	21.52%	1784	2151	21.06%	25.40%
						Predicted Neg	47	55	29.75%	34.81%	1971	2564	23.27%	30.27%
	7	54.43%	47.27%	37.68%	41.94%	Predicted Pos	26	29	16.46%	18.35%	2531	3007	21.34%	25.36%
						Predicted Neg	43	60	27.22%	37.97%	2726	3594	22.99%	30.31%
	9	59.49%	54.90%	40.58%	46.67%	Predicted Pos	28	23	17.72%	14.56%	3255	3668	21.35%	25.37%
						Predicted Neg	41	66	25.95%	41.77%	3504	4619	22.98%	30.30%
2	3	50.22%	63.33%	29.92%	40.64%	Predicted Pos	38	22	17.04%	9.87%	1761	1211	24.80%	17.05%
						Predicted Neg	89	74	39.91%	33.18%	2364	1765	33.29%	24.86%
	5	45.74%	55.77%	22.83%	32.40%	Predicted Pos	29	23	13.00%	10.31%	2930	2058	24.76%	17.39%
						Predicted Neg	98	73	43.95%	32.74%	3945	2902	33.33%	24.52%
	7	48.43%	61.11%	25.98%	36.46%	Predicted Pos	33	21	14.80%	9.42%	4173	2924	25.19%	17.65%
						Predicted Neg	94	75	42.15%	33.63%	5452	4020	32.90%	24.26%
	9	45.29%	55.32%	20.47%	29.89%	Predicted Pos	26	21	11.66%	9.42%	5356	3751	25.14%	17.61%
						Predicted Neg	101	75	45.29%	33.63%	7019	5177	32.95%	24.30%
3	3	50.31%	34.55%	30.16%	32.20%	Predicted Pos	19	36	11.80%	22.36%	935	1431	18.30%	28.01%
						Predicted Neg	44	62	27.33%	38.51%	1078	1665	21.10%	32.59%
	5	53.42%	38.46%	31.75%	34.78%	Predicted Pos	20	32	12.42%	19.88%	1520	2413	17.85%	28.34%
						Predicted Neg	43	66	26.71%	40.99%	1835	2747	21.55%	32.26%
	7	52.80%	38.18%	33.33%	35.59%	Predicted Pos	21	34	13.04%	21.12%	2155	3382	18.08%	28.37%
						Predicted Neg	42	64	26.09%	39.75%	2542	3842	21.32%	32.23%
	9	49.69%	32.69%	26.98%	29.57%	Predicted Pos	17	35	10.56%	21.74%	2765	4369	18.04%	28.51%
						Predicted Neg	46	63	28.57%	39.13%	3274	4919	21.36%	32.09%
4	3	49.49%	70.59%	30.00%	42.11%	Predicted Pos	36	15	18.37%	7.65%	1563	906	25.97%	15.65%
						Predicted Neg	84	61	42.86%	31.12%	2193	1356	36.44%	22.53%
	5	47.96%	70.45%	25.83%	37.80%	Predicted Pos	31	13	15.82%	6.63%	2626	1517	26.18%	15.12%
						Predicted Neg	89	63	45.41%	32.14%	3634	2253	36.23%	22.46%
	7	46.94%	69.05%	24.17%	35.80%	Predicted Pos	29	13	14.80%	6.63%	3668	2151	26.12%	15.32%
						Predicted Neg	91	63	46.43%	32.14%	5096	3127	36.29%	22.27%
	9	46.94%	70.00%	23.33%	35.00%	Predicted Pos	28	12	14.29%	6.12%	4768	2759	26.41%	15.28%
						Predicted Neg	92	64	46.94%	32.65%	6500	4027	36.00%	22.31%
5	3	50.22%	63.33%	29.92%	40.64%	Predicted Pos	38	22	17.04%	9.87%	1761	1211	24.80%	17.05%
						Predicted Neg	89	74	39.91%	33.18%	2364	1765	33.29%	24.86%
	5	45.74%	55.77%	22.83%	32.40%	Predicted Pos	29	23	13.00%	10.31%	2930	2058	24.76%	17.39%
						Predicted Neg	98	73	43.95%	32.74%	3945	2902	33.33%	24.52%
	7	48.43%	61.11%	25.98%	36.46%	Predicted Pos	33	21	14.80%	9.42%	4173	2924	25.19%	17.65%
						Predicted Neg	94	75	42.15%	33.63%	5452	4020	32.90%	24.26%
	9	45.29%	55.32%	20.47%	29.89%	Predicted Pos	26	21	11.66%	9.42%	5356	3751	25.14%	17.61%
						Predicted Neg	101	75	45.29%	33.63%	7019	5177	32.95%	24.30%