

MODEL REPORT

BRAND A:

Selected Model: **SVM Bayesian** (among Logit, Bernoulli Naive Bayes, SVM Sigmoid, SVM Polynomial, Random Forest, Artificial Neural Network).

Selected Variables: **66** (vrb_254, vrb_365, vrb_13, vrb_241, vrb_235, vrb_209, vrb_399, vrb_400, vrb_022, vrb_021, vrb_008, vrb_155, vrb_018, vrb_019, vrb_266, vrb_291, vrb_388, vrb_352, vrb_310, vrb_325, vrb_425, vrb_432, vrb_163, vrb_174, vrb_002, vrb_005, vrb_169, vrb_075, vrb_451, vrb_231, vrb_301, vrb_298, vrb_273, vrb_107, vrb_104, vrb_458, vrb_298, vrb_176, vrb_95, vrb_26, vrb_307, vrb_308, vrb_290, vbr_174, vbr_115, vbr_83, vbr_374, vbr_23, vbr_433, vbr_410, vbr_333, vbr_292, vbr_143, vbr_264, vbr_359, vrb_310, vrb_111, vrb_009, vrb_114, vrb_121, vrb_421, vrb_410, vrb_495, vrb_498, vrb_064, vrb_058).

Dataset: **450 instances** (80% training | 20% validation).

TRAINING METRICS:

Accuracy: 0.8778

Precision: 0.8929

Recall: 0.8373

F: 0.8642

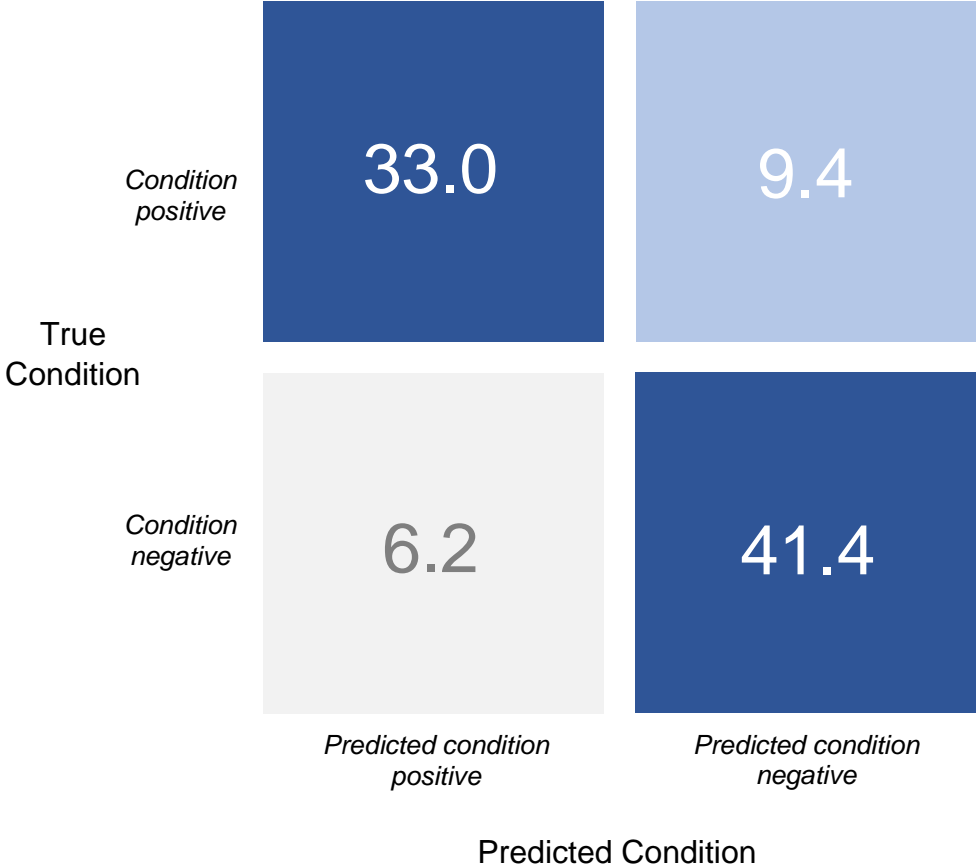
Contingency Table:

True Condition	Condition positive	140	27
	Condition negative	17	176
		Predicted condition positive	Predicted condition negative
		Predicted Condition	

VALIDATION METRICS (average of 30 iterations):

Accuracy: 0.8267
Precision: 0.8418
Recall: 0.7783
F: 0.8088

Contingency Table:



BRAND B:

Selected Model: Random Forest (among Logit, Bernoulli Naive Bayes, SVM Bayesian, SVM Sigmoid, SVM Polynomial, Artificial Neural Network).

Selected Variables: 72 (vbr_83, vbr_374, vbr_23, vbr_433, vbr_410, vbr_333, vbr_292, vbr_143, vbr_264, vbr_359, vrb_310, vbr_010, vbr_013, vbr_055, vbr_028, vbr_210, vbr_205, vbr_251, vbr_268, vbr_307, vbr_313, vbr_478, vbr_488, vrb_254, vrb_365, vrb_13, vrb_241, vrb_235, vrb_209, vrb_399, vrb_400, vrb_022, vrb_021, vrb_008, vrb_155, vrb_163, vrb_174, vrb_002, vrb_005, vrb_169, vrb_075, vrb_451, vrb_231, vrb_301, vrb_298, vrb_273, vrb_107, vrb_104, vrb_458, vrb_298, vrb_176, vrb_95, vrb_26, vrb_307, vrb_308, vrb_290, vbr_174, vbr_115, vbr_502, vbr_510, vbr_473, vbr_451, vbr_371, vbr_325, vbr_226, vbr_222, vbr_217, vbr_198, vbr_061, vbr_070, vbr_080, vbr_118).

Dataset: 500 instances (80% training | 20% validation).

TRAINING METRICS:

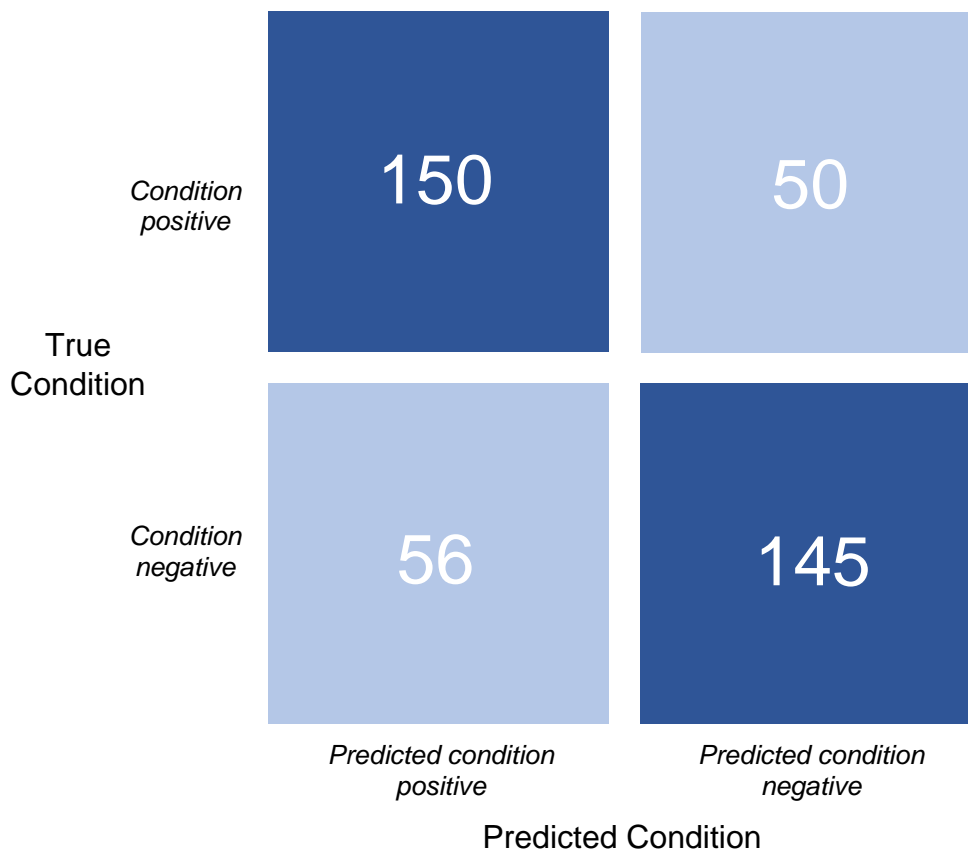
Accuracy: 0.7360

Precision: 0.7276

Recall: 0.7510

F: 0.7391

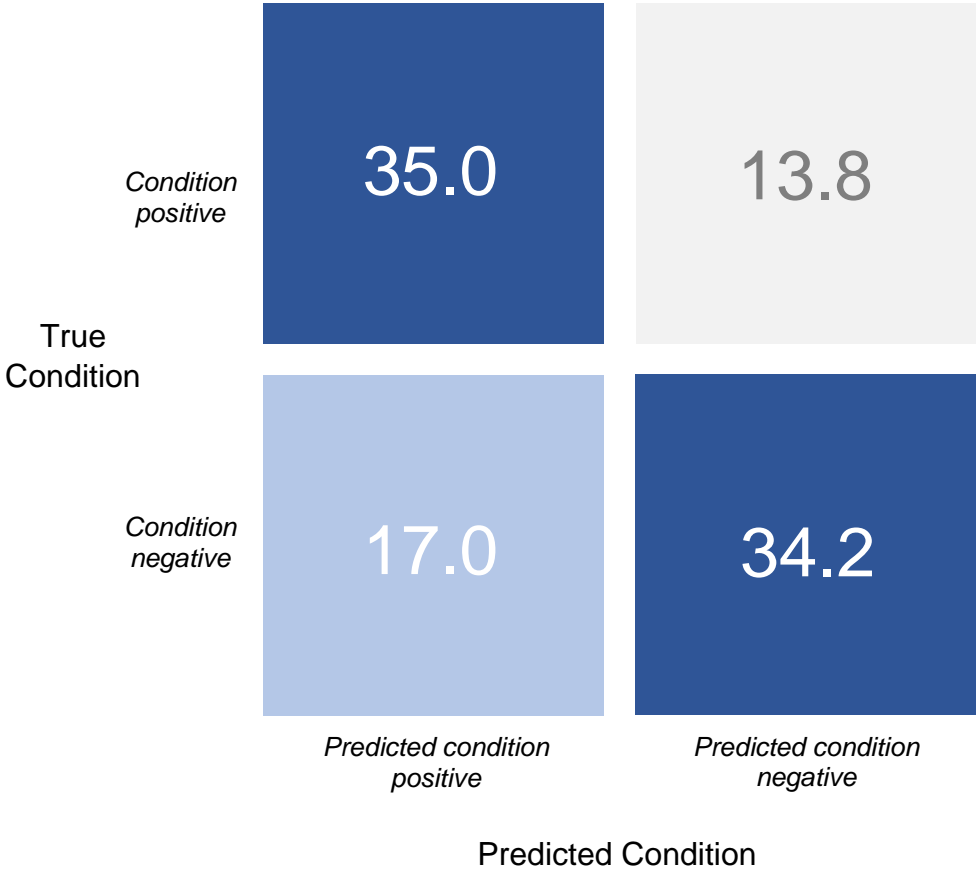
Contingency Table:



VALIDATION METRICS (average of 30 iterations):

Accuracy: 0.6920
Precision: 0.6731
Recall: 0.7172
F: 0.6944

Contingency Table:



BRAND C:

Selected Model: Artificial Neural Network (among Logit, Bernoulli Naive Bayes, SVM Bayesian, SVM Sigmoid, SVM Polynomial, Random Forest).

Selected Variables: 81 (vrb_273, vrb_107, vrb_104, vrb_458, vrb_298, vrb_176, vrb_95, vrb_26, vrb_307, vrb_308, vrb_290, vbr_174, vbr_115, vbr_502, vbr_510, vbr_473, vbr_451, vbr_371, vbr_325, vbr_226, vbr_222, vbr_217, vbr_198, vbr_061, vbr_070, vbr_080, vbr_118, vbr_159, vbr_83, vbr_374, vbr_23, vbr_433, vbr_410, vrb_235, vrb_209, vrb_399, vrb_400, vrb_022, vrb_021, vrb_008, vrb_155, vrb_163, vrb_174, vrb_002, vrb_005, vrb_169, vrb_075, vrb_451, vrb_231, vrb_301, vrb_298, vrb_310, vbr_010, vbr_013, vbr_055, vbr_028, vbr_210, vbr_205, vbr_251, vbr_268, vbr_307, vbr_313, vbr_478, vbr_488, vrb_254, vrb_365, vrb_13, vrb_241, vbr_160, vbr_241, vbr_243, vbr_320, vbr_382, vbr_385, vbr_520, vbr_073, vbr_333, vbr_292, vbr_143, vbr_264, vbr_359).

Dataset: 560 instances (80% training | 20% validation).

TRAINING METRICS:

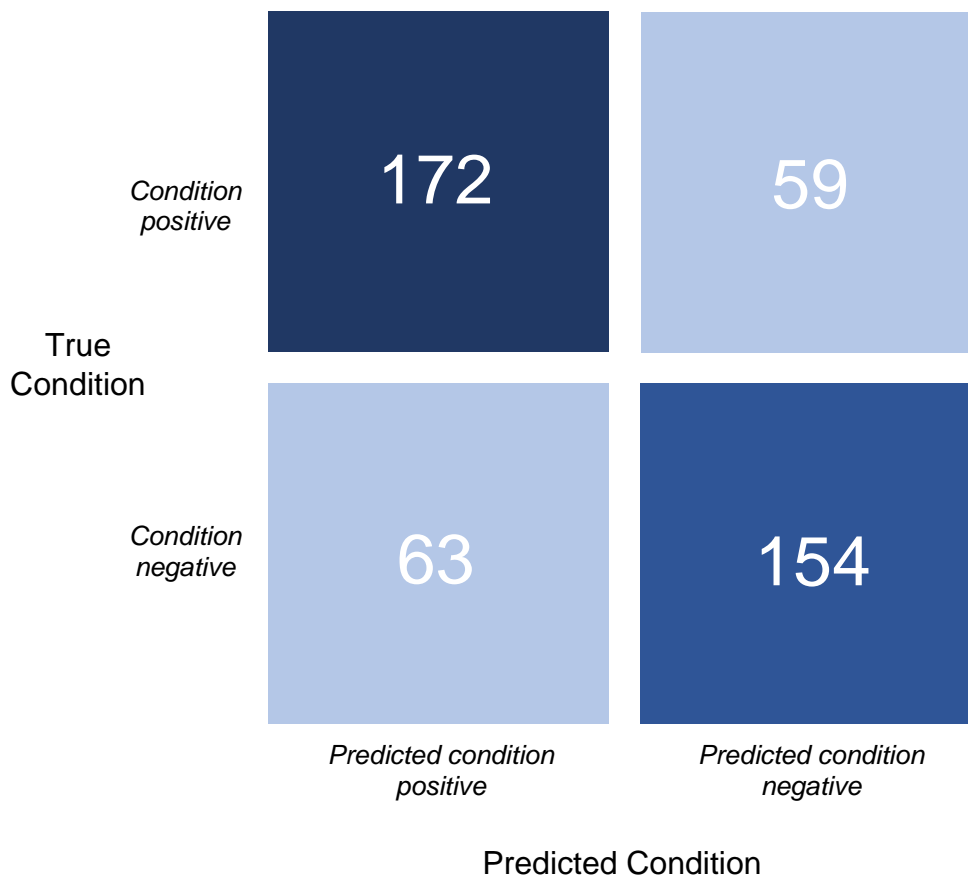
Accuracy: 0.7268

Precision: 0.7313

Recall: 0.7439

F: 0.7376

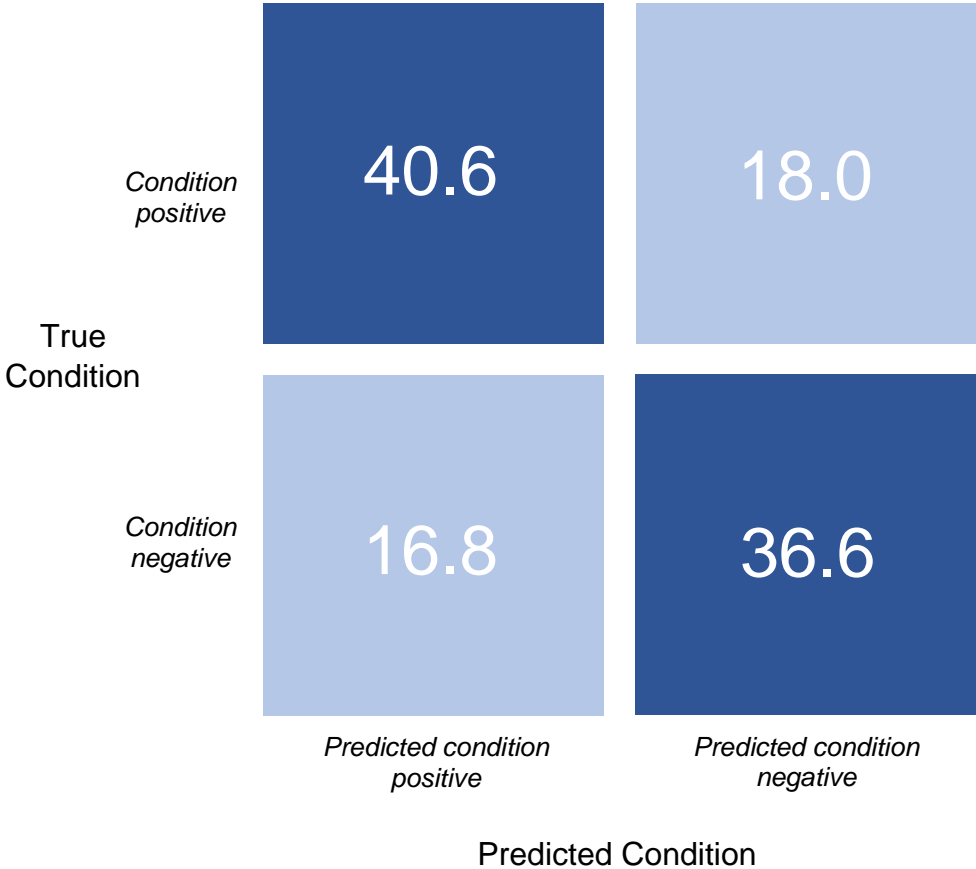
Contingency Table:



VALIDATION METRICS (average of 30 iterations):

Accuracy: 0.6893
Precision: 0.7073
Recall: 0.6928
F: 0.7000

Contingency Table:



BRAND D:

Selected Model: **SVM Polynomial** (among Logit, Bernoulli Naive Bayes, SVM Bayesian, SVM Sigmoid, Random Forest, Artificial Neural Network).

Selected Variables: **54** (vbr_222, vbr_217, vbr_198, vbr_061, vbr_070, vbr_080, vbr_118, vbr_159, vbr_83, vbr_374, vbr_23, vbr_433, vbr_410, vrb_235, vrb_209, vrb_399, vrb_400, vrb_022, vrb_021, vrb_008, vbr_521, vbr_412, vbr_305, vbr_401, vbr_032, vbr_014, vbr_147, vbr_166, vbr_066, vrb_273, vrb_107, vrb_104, vrb_458, vrb_298, vrb_176, vrb_95, vrb_26, vrb_307, vrb_308, vrb_290, vrb_310, vbr_010, vbr_013, vbr_055, vbr_028, vbr_210, vbr_205, vbr_251, vbr_268, vbr_307, vbr_313, vbr_478, vbr_488, vrb_254).

Dataset: **280 instances** (80% training | 20% validation).

TRAINING METRICS:

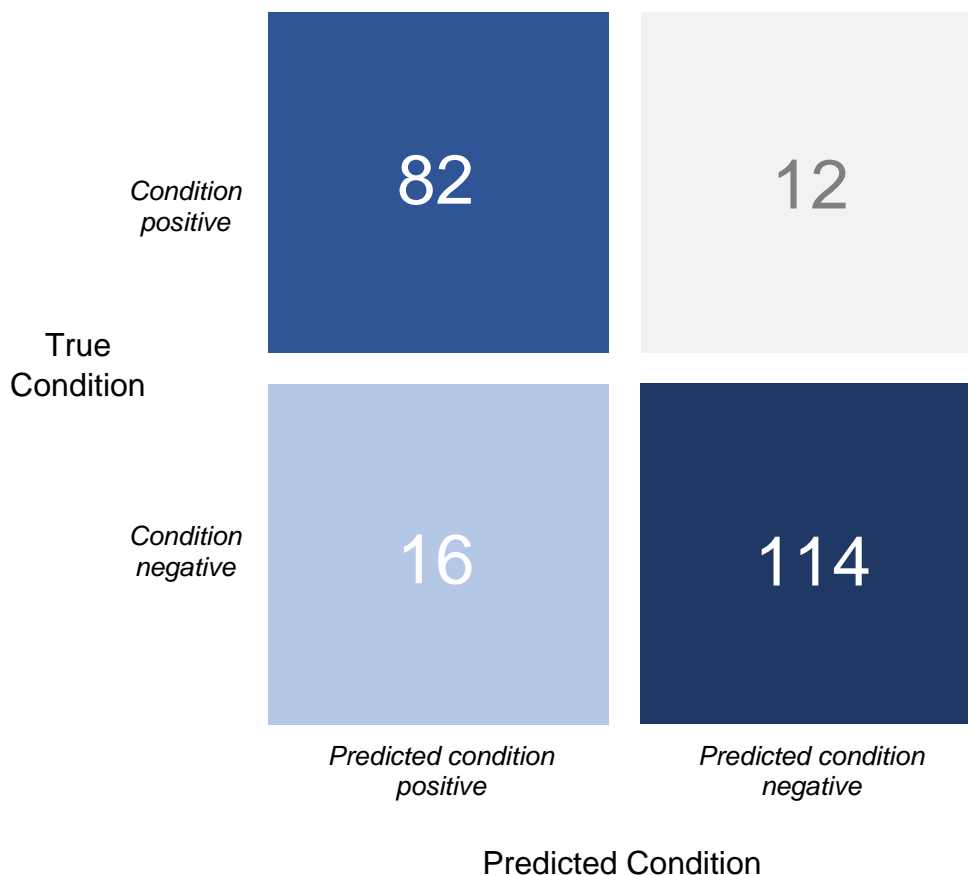
Accuracy: 0.8750

Precision: 0.8361

Recall: 0.8718

F: 0.8536

Contingency Table:



VALIDATION METRICS (average of 30 iterations):

Accuracy: 0.8393
Precision: 0.7823
Recall: 0.8435
F: 0.8117

Contingency Table:

