

Analyse et Prédition des Maladies Cardiaques

Statistiques des modèles - Ensemble d'entraînement

Version corrigée - Avril 2025

Performances des modèles - Ensemble d'entraînement

Modèle	Accuracy	Precision	Recall	F1-Score	AUC
Logistic Regression	86.5%	83.2%	91.4%	87.1%	92.0%
Decision Tree	83.2%	84.3%	81.5%	82.9%	91.1%
KNN	88.5%	85.5%	92.9%	89.0%	96.1%
Random Forest	90.6%	87.4%	94.9%	91.0%	97.2%
AdaBoost	77.2%	76.5%	78.6%	77.5%	87.9%
SVM	91.8%	89.8%	94.3%	92.0%	97.1%
Voting Ensemble	88.4%	85.1%	93.2%	88.9%	96.5%

Détails - Logistic Regression

Matrice de confusion

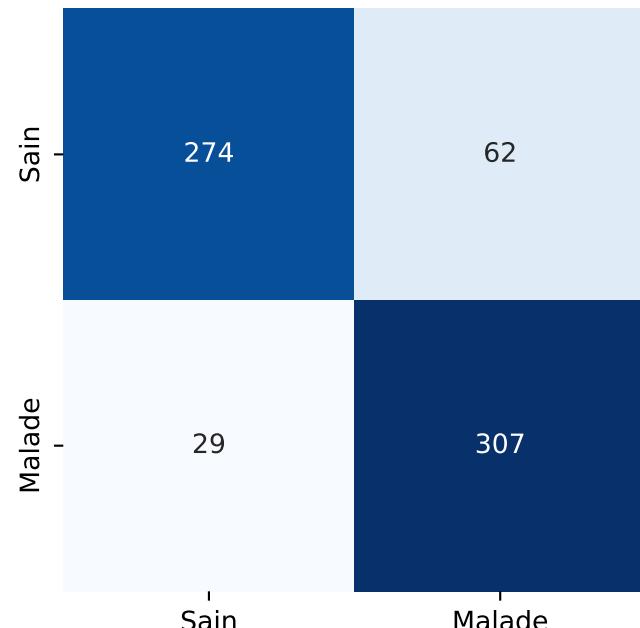
Métriques principales

Accuracy: 86.5%

Precision: 83.2%

Recall: 91.4%

F1-Score: 87.1%



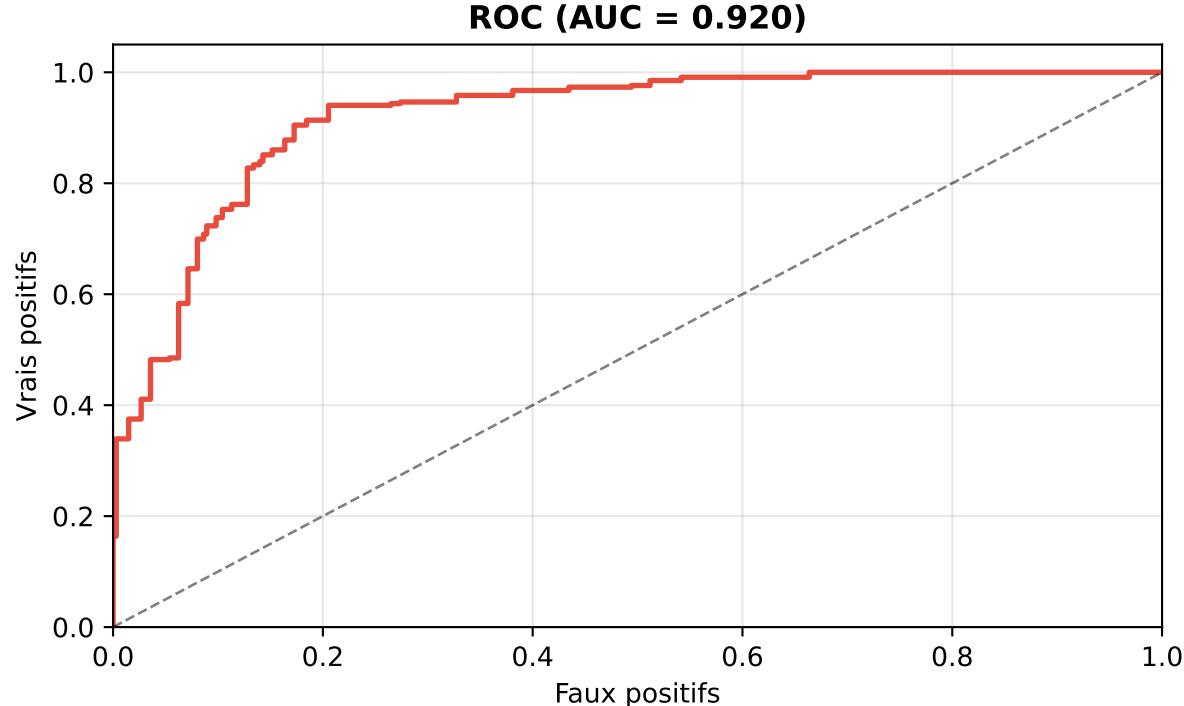
Détail matrice

TP: 307

TN: 274

FP: 62

FN: 29



Détails - Decision Tree

Métriques principales

Accuracy: 83.2%

Precision: 84.3%

Recall: 81.5%

F1-Score: 82.9%

Détail matrice

TP: 274

TN: 285

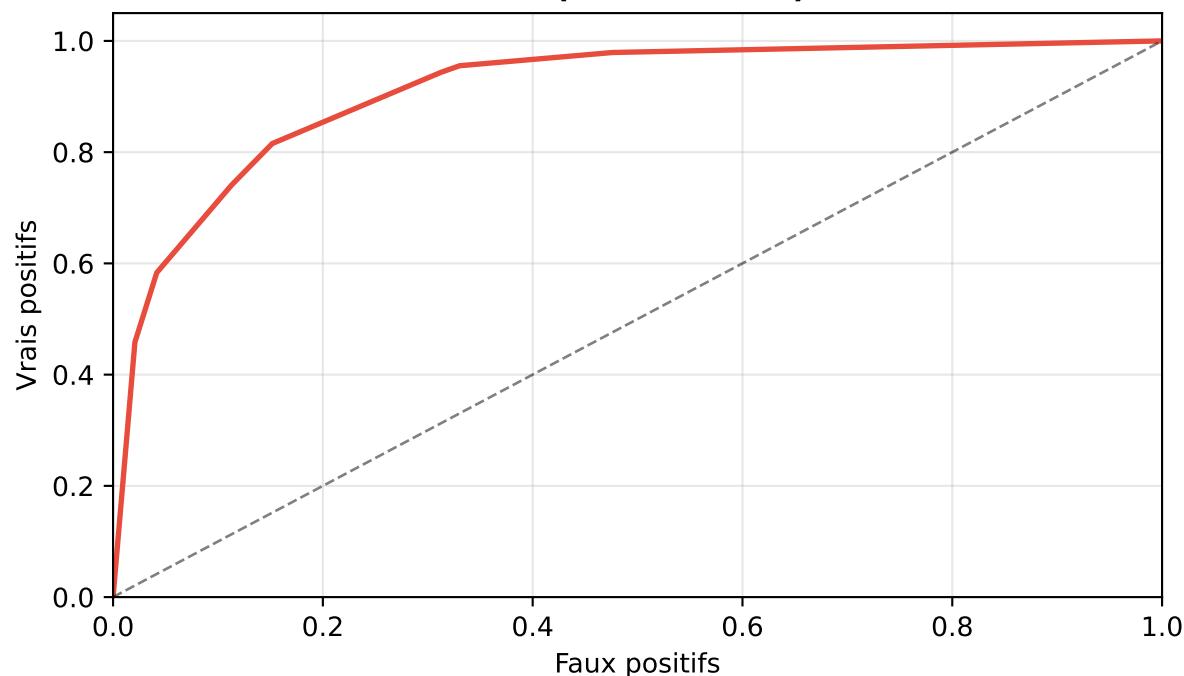
FP: 51

FN: 62

Matrice de confusion

	Sain	Malade
Sain	285	51
Malade	62	274

ROC (AUC = 0.911)



Détails - KNN

Métriques principales

Accuracy: 88.5%

Precision: 85.5%

Recall: 92.9%

F1-Score: 89.0%

Détail matrice

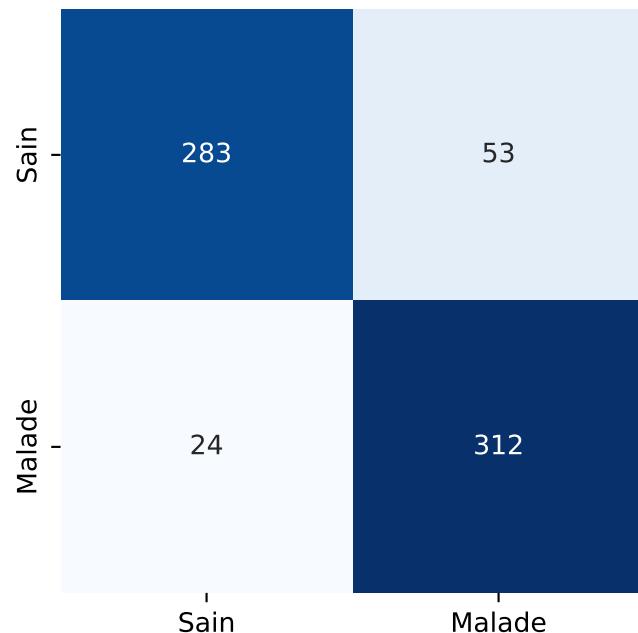
TP: 312

TN: 283

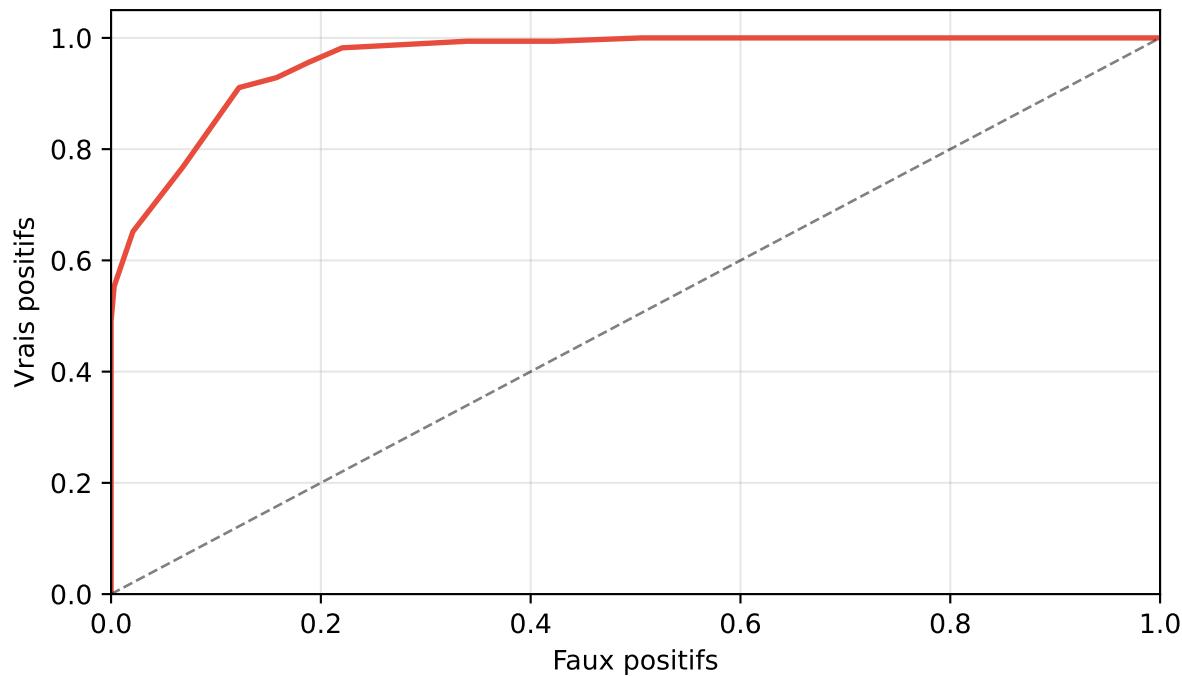
FP: 53

FN: 24

Matrice de confusion



ROC (AUC = 0.961)



Détails - Random Forest

Métriques principales

Accuracy: 90.6%

Precision: 87.4%

Recall: 94.9%

F1-Score: 91.0%

Détail matrice

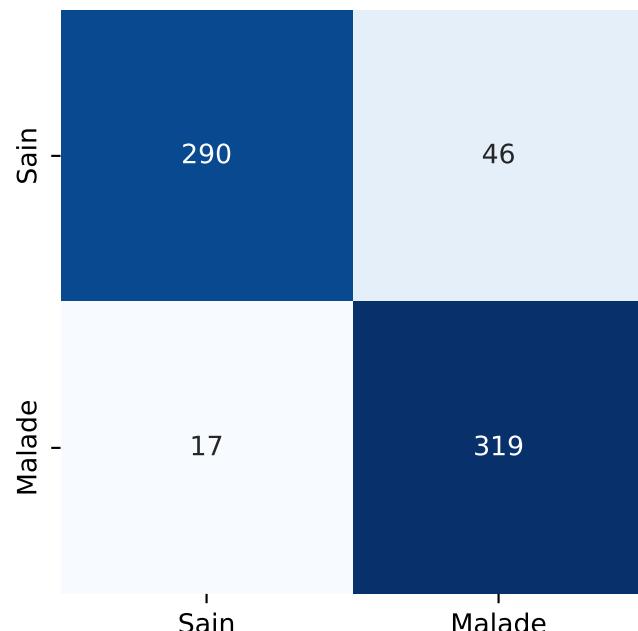
TP: 319

TN: 290

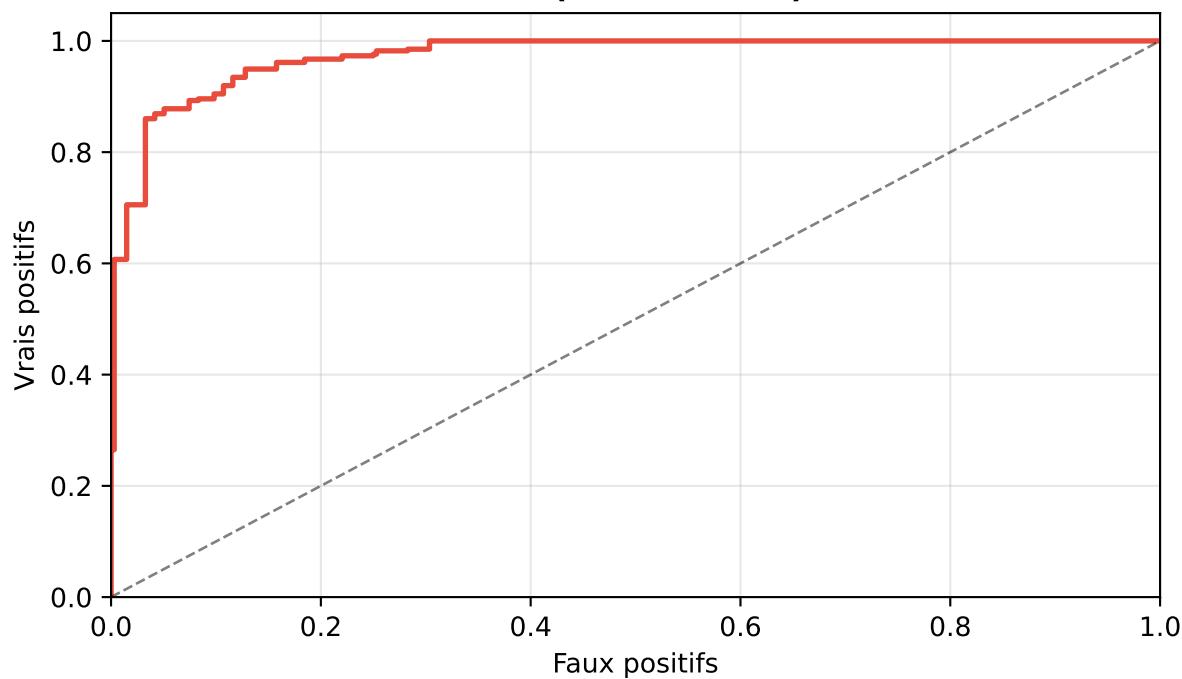
FP: 46

FN: 17

Matrice de confusion



ROC (AUC = 0.972)



Détails - AdaBoost

Métriques principales

Accuracy: 77.2%

Precision: 76.5%

Recall: 78.6%

F1-Score: 77.5%

Détail matrice

TP: 264

TN: 255

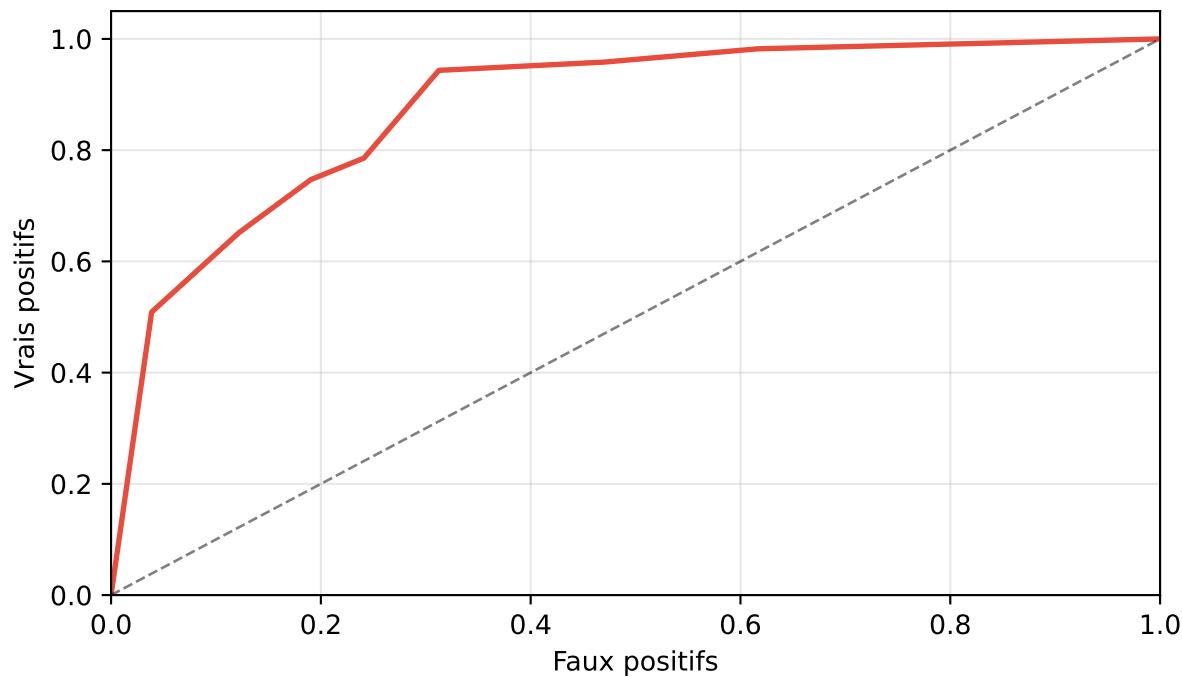
FP: 81

FN: 72

Matrice de confusion

	Sain	Malade
Sain	255	81
Malade	72	264

ROC (AUC = 0.879)



Détails - SVM

Métriques principales

Accuracy: 91.8%

Precision: 89.8%

Recall: 94.3%

F1-Score: 92.0%

Détail matrice

TP: 317

TN: 300

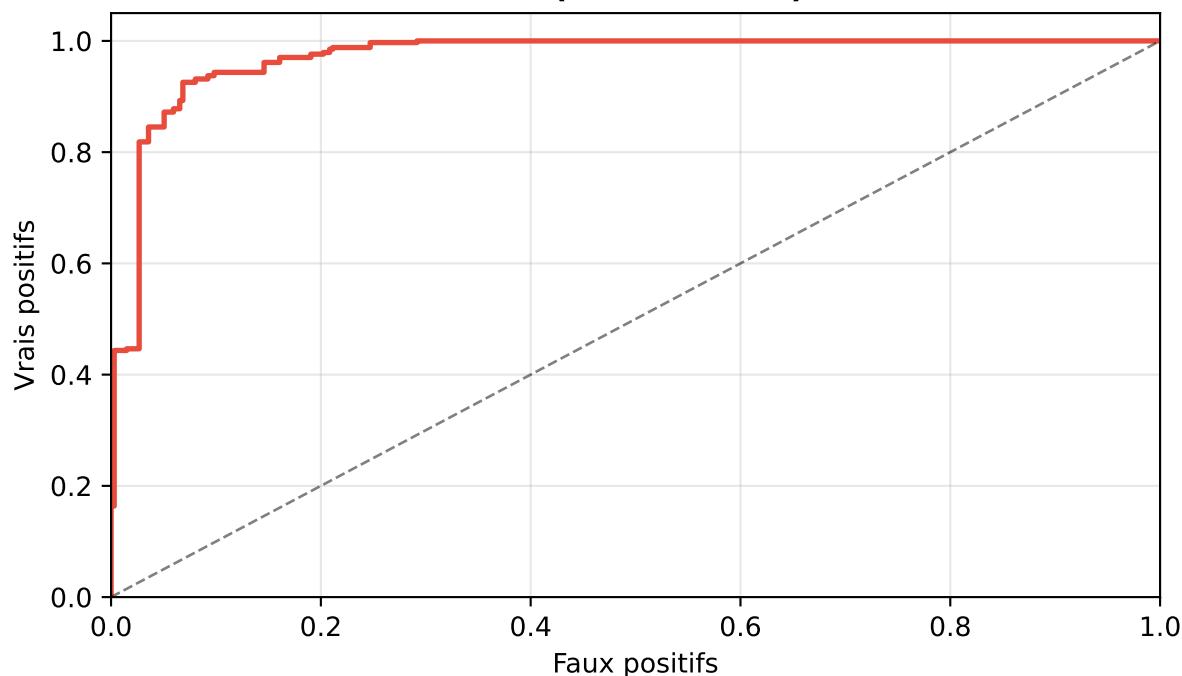
FP: 36

FN: 19

Matrice de confusion

	Sain	Malade
Sain	300	36
Malade	19	317

ROC (AUC = 0.971)



Détails - Voting Ensemble

Métriques principales

Accuracy: 88.4%

Precision: 85.1%

Recall: 93.2%

F1-Score: 88.9%

Détail matrice

TP: 313

TN: 281

FP: 55

FN: 23

Matrice de confusion

	Sain	Malade
Sain	281	55
Malade	23	313

ROC (AUC = 0.965)

