



# Predict Diabetes

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# Data



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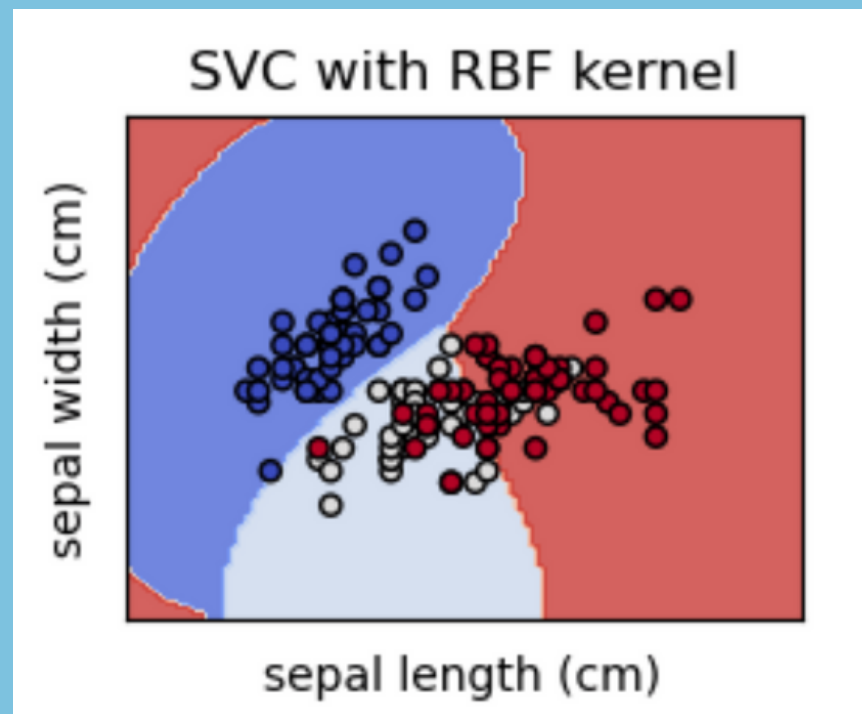
Columns	Description
Pregnancies	To express the Number of pregnancies
Glucose	To express the Glucose level in blood
BloodPressure	To express the Blood pressure measurement
SkinThickness	To express the thickness of the skin
Insulin	To express the Insulin level in blood
BMI	To express the Body mass index
DiabetesPedigreeFunction	To express the Diabetes percentage
Age	To express the age
Outcome	To express the final result 1 is Yes and 0 is No

768 rows × 9 columns

View less

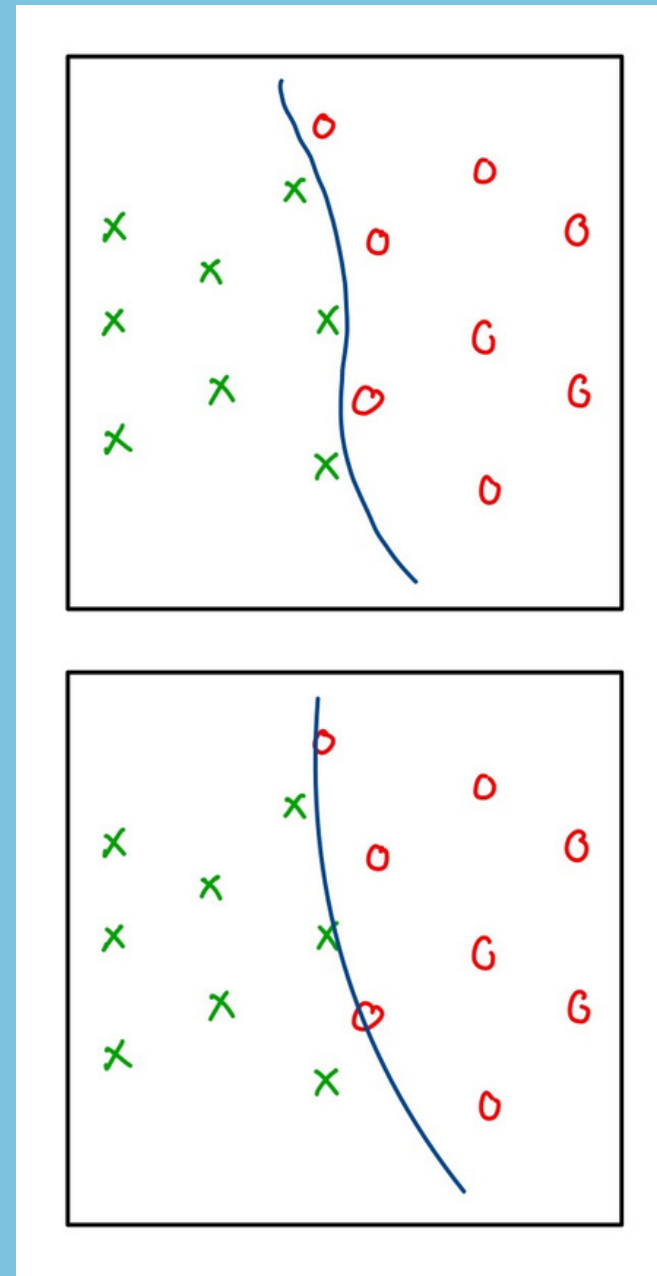
Ref : <https://www.kaggle.com/datasets/whenamancodes/predict-diabilities>

# Support Vector Machine →



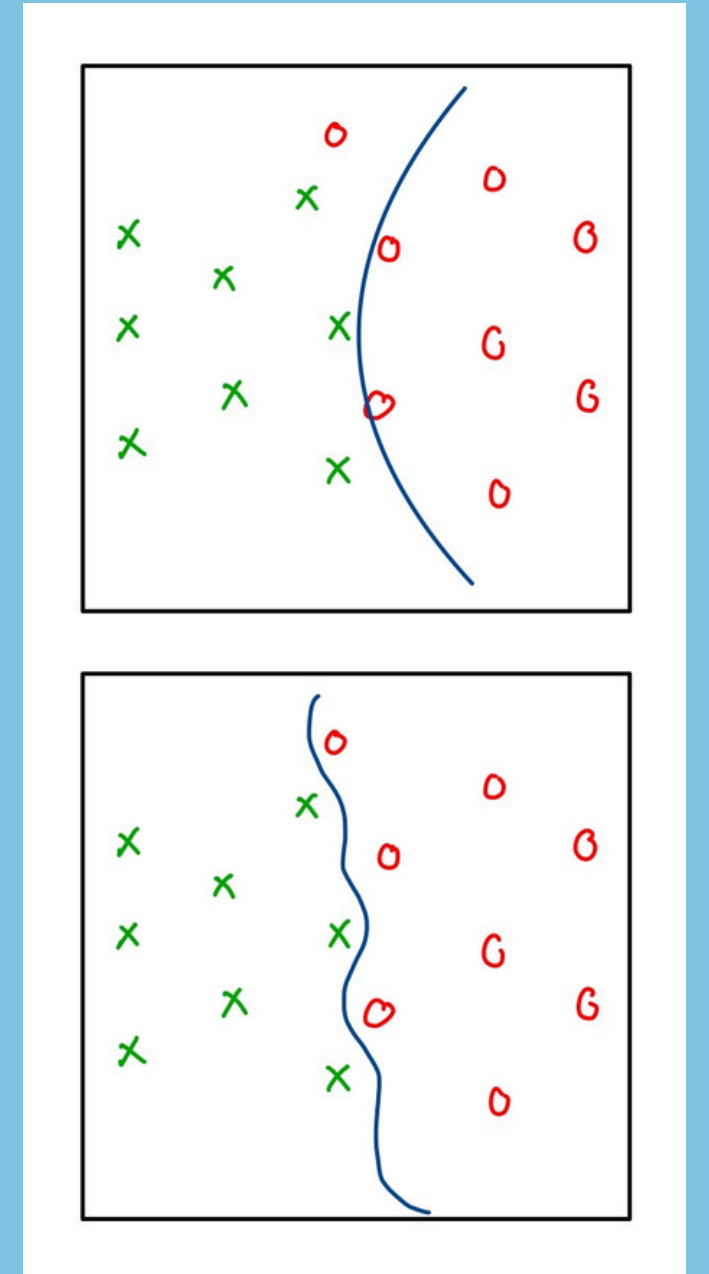
REF : [HTTPS://SCIKIT-LEARN.ORG/STABLE/MODULES/SVM.HTML](https://scikit-learn.org/stable/modules/svm.html)

LOW C



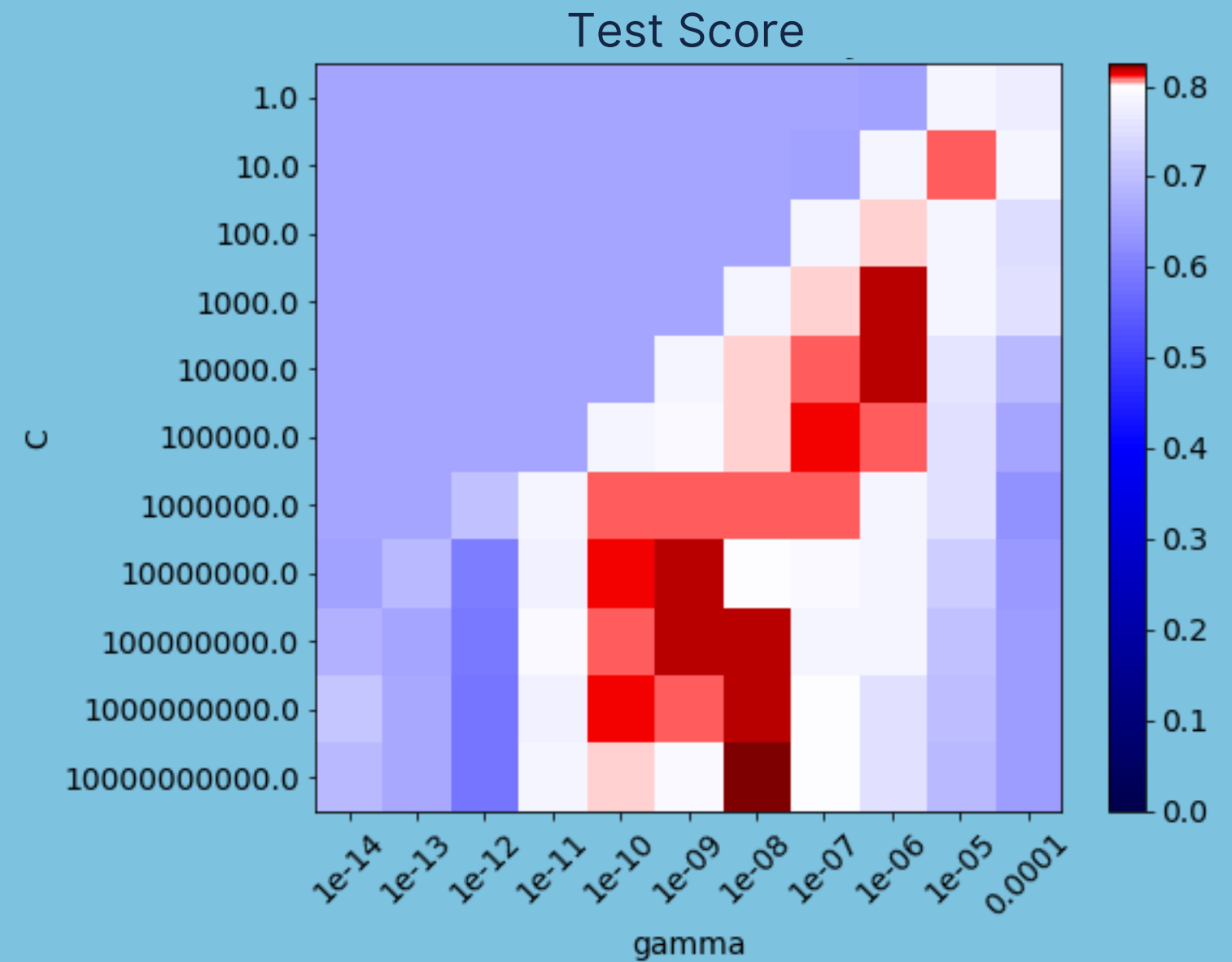
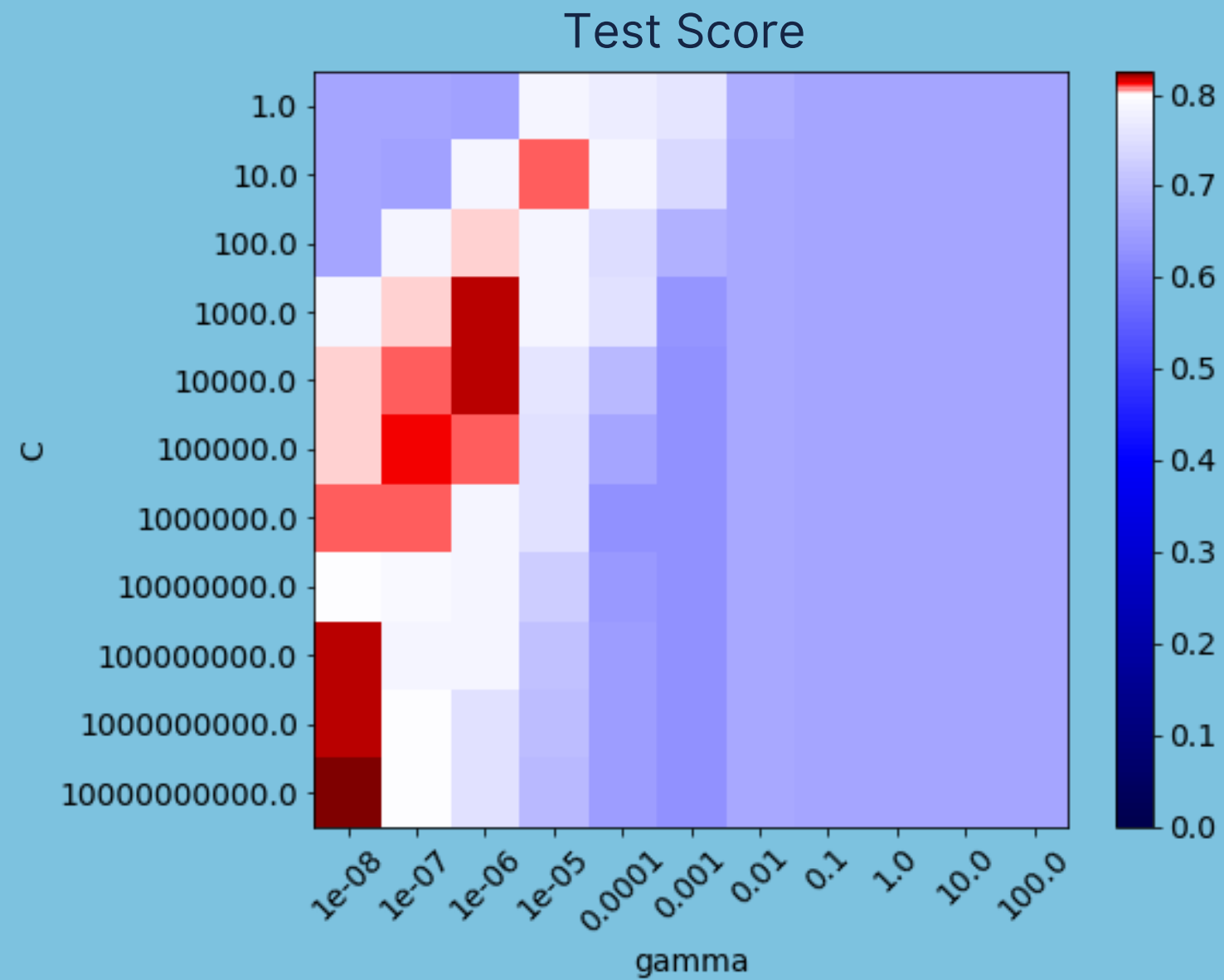
HIGH C

LOW GAMMA



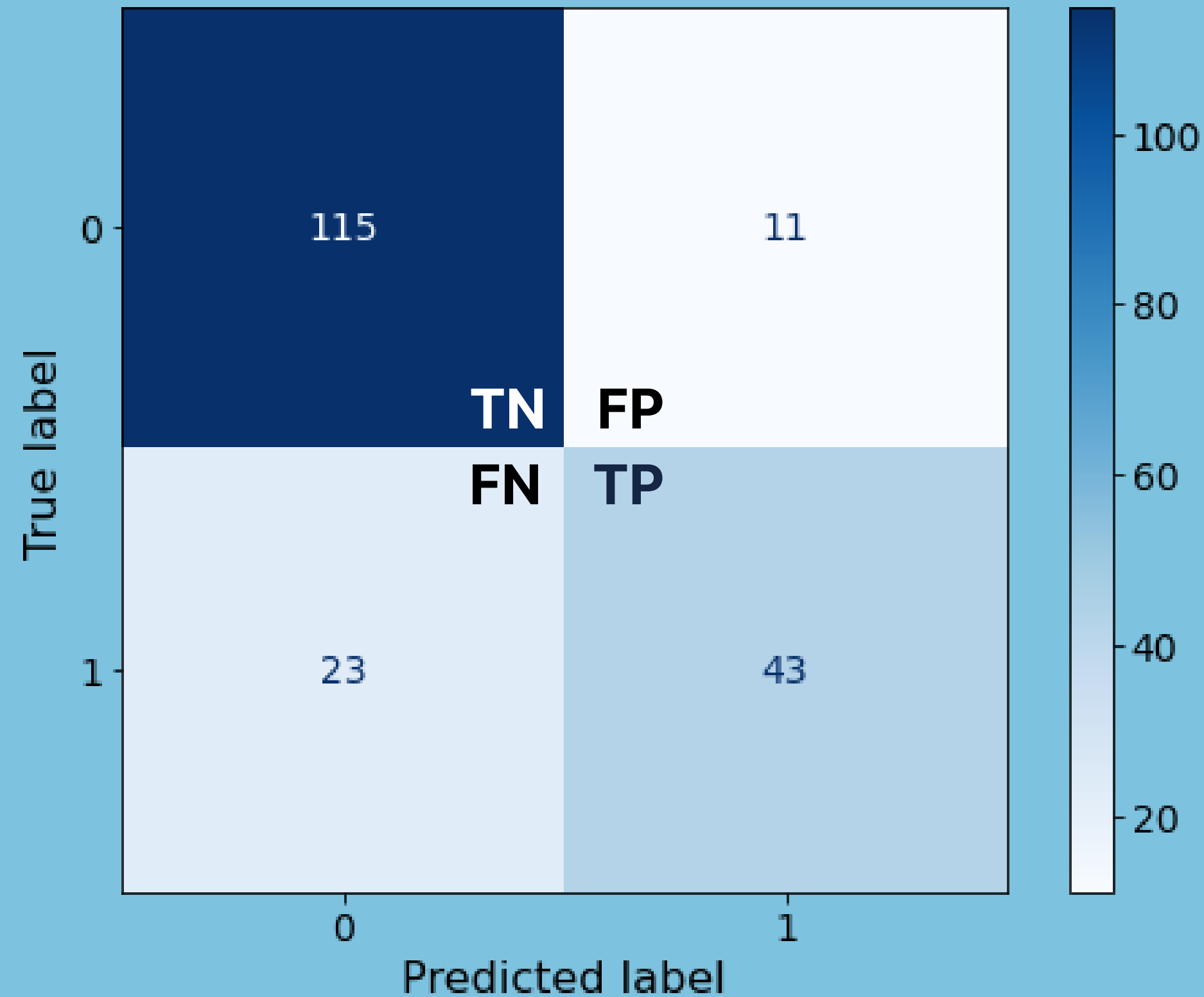
HIGH GAMMA

# Find C & gamma →



- $C=1e10$
- $\text{gamma}=1e-08$

# Result

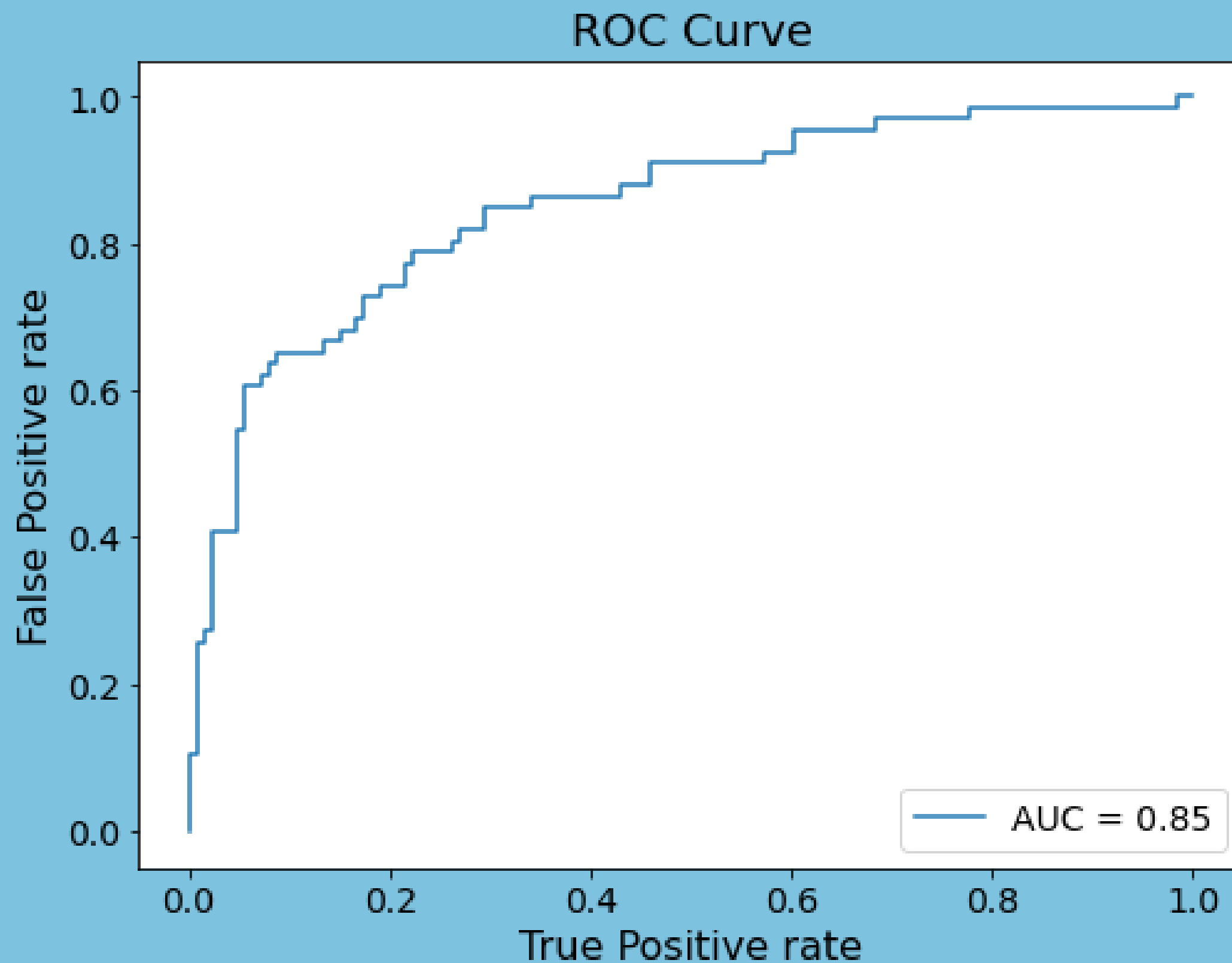
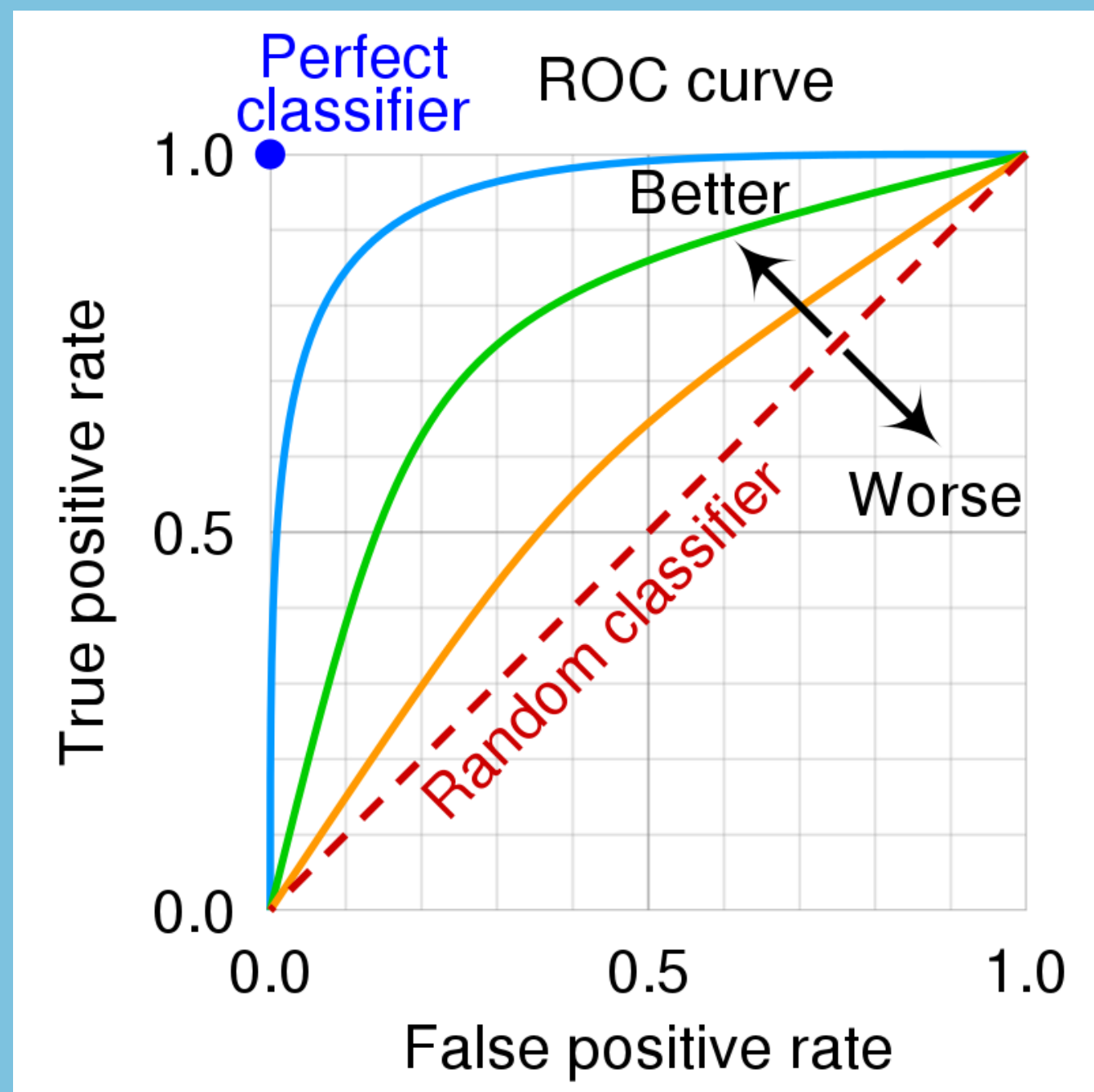


$$\begin{aligned}\text{Accuracy} &= \frac{\text{TN} + \text{TP}}{\text{TN} + \text{FP} + \text{FN} + \text{TP}} \\ &= \frac{115 + 43}{192} \\ &= 0.823 \\ &= 82.3\%\end{aligned}$$

# Result



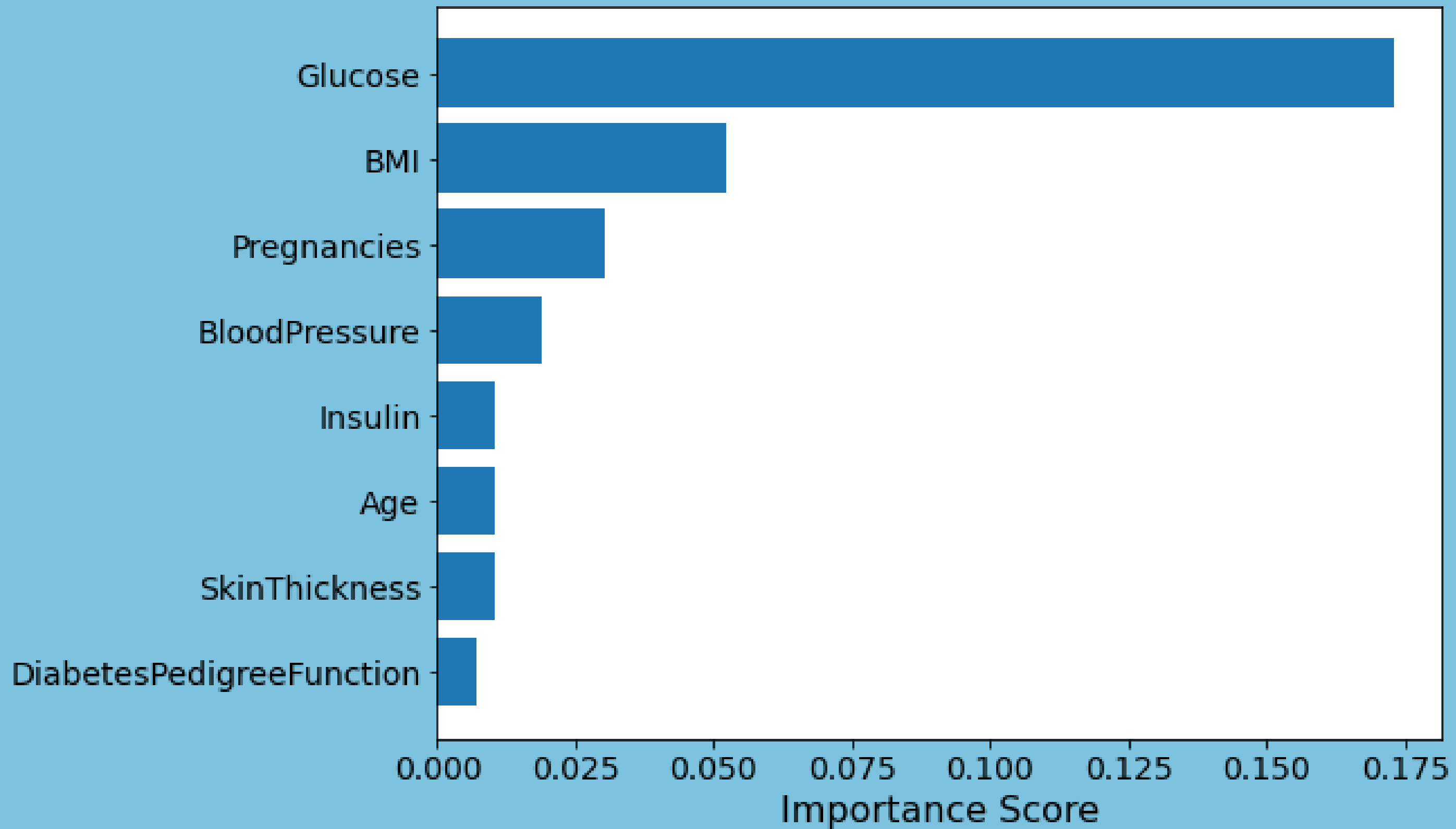
5



# Result



6



# Result



7

