Will You Pass?

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Why?

⬆ **Mental Stress Among Children**

➡ **Negative Health Effects**

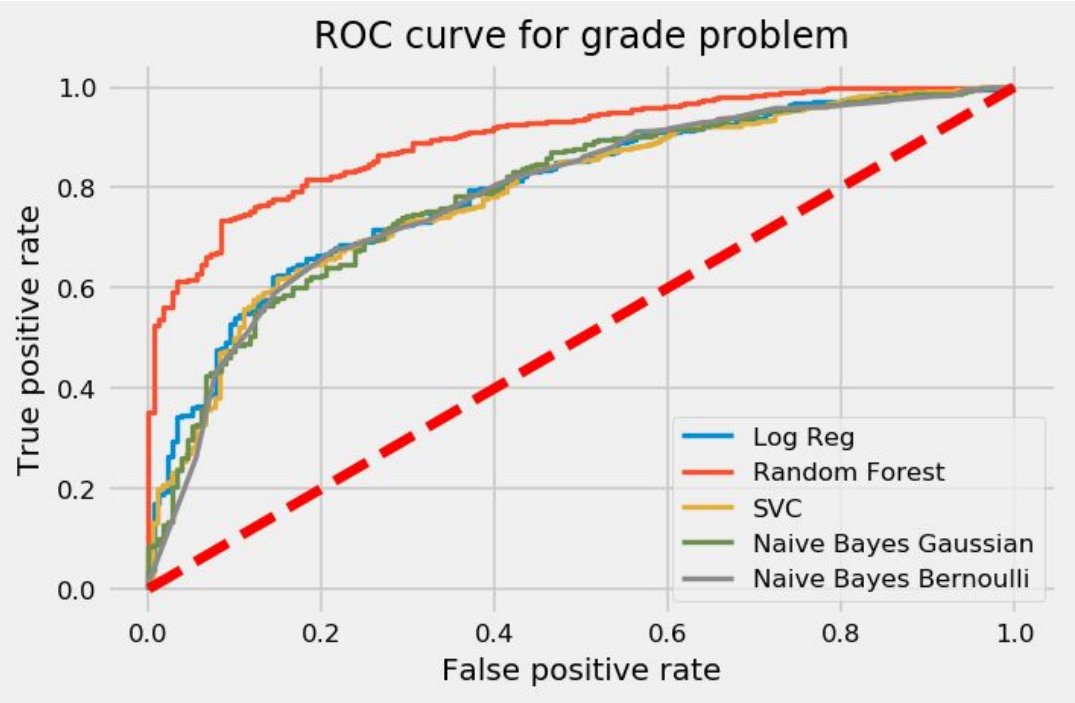
🤯 **Most High School Students Consider Cheating OK**

How?

- Portuguese High-school Survey (2014)
- Contesting Models:
    - K-Nearest Neighbours (KNN)
    - Logistic Regression
    - Random Forest
    - Naive Bayes (Bernoulli)
    - Naive Bayes (Gaussian)
    - Support Vector Classification (SVC)
    - Stochastic Gradient Descent (SGD)

Random Forest

Why Random Forest?



Final Test:

- **Precision Score: 86%**

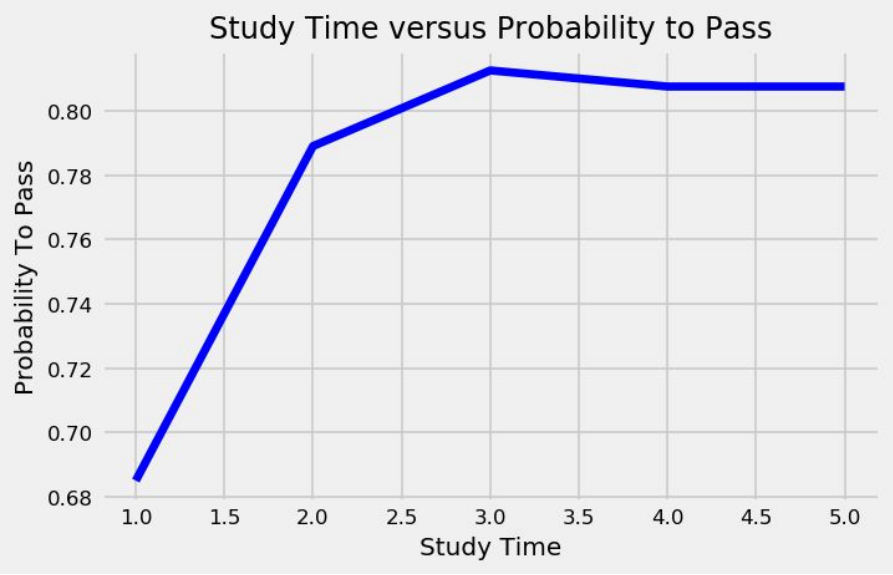
So Wouldn't It Be Great?

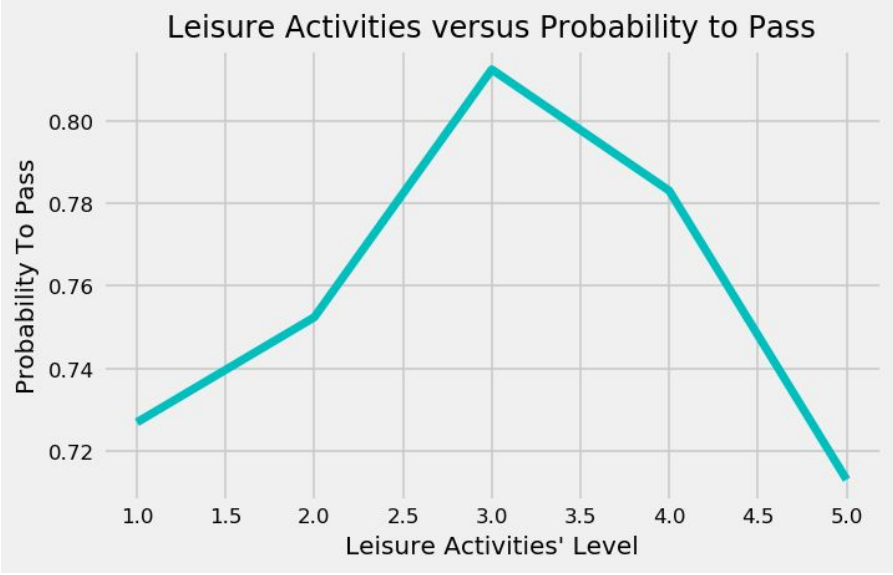
- Personal Info
- Family Info
- Historical Info (discipline related)
- Seemingly Unrelated Details

PASS OR FAIL

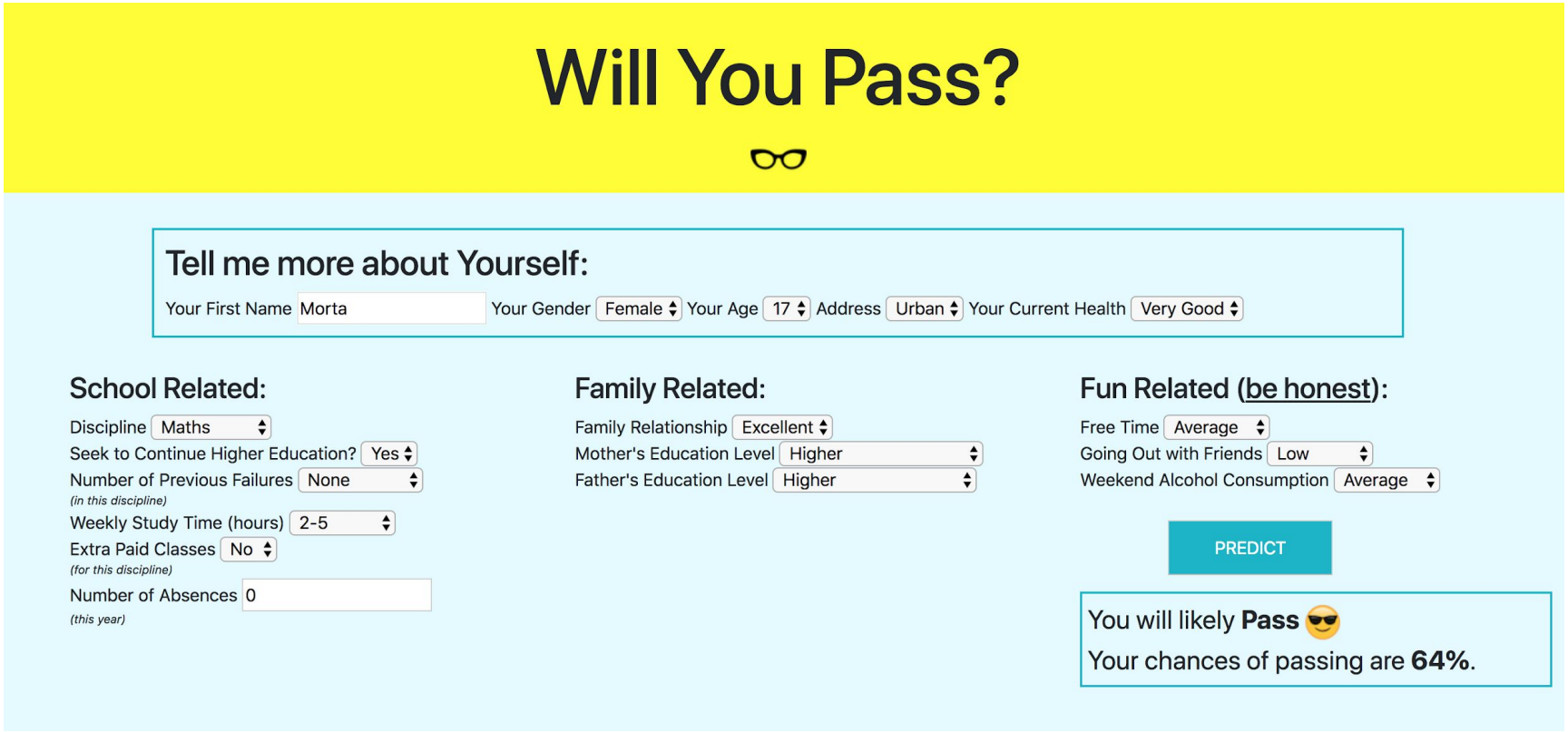
Fun Facts

All Else Held Constant





Live Demo


Will You Pass?
Tell me more about Yourself:
Your First Name Morta
Your Gender Female
Your Age 17
Address Urban
Your Current Health Very Good
School Related:
Discipline Maths
Seek to Continue Higher Education? Yes
Number of Previous Failures None
(in this discipline)
Weekly Study Time (hours) 2-5
Extra Paid Classes No
(for this discipline)
Number of Absences 0
(this year)
Family Related:
Family Relationship Excellent
Mother's Education Level Higher
Father's Education Level Higher
Fun Related (be honest):
Free Time Average
Going Out with Friends Low
Weekend Alcohol Consumption Average
PREDICT
You will likely Pass
Your chances of passing are 64%.

Thank You!

Resources

P. Cortez and A. Silva. Using Data Mining to Predict Secondary School Student Performance. In A. Brito and J. Teixeira Eds., Proceedings of 5th FUture BUsiness TEChnology Conference (FUBUTEC 2008) pp. 5-12, Porto, Portugal, April, 2008, EUROSIS, ISBN 978-9077381-39-7.

[Web Link]