

The background features several geometric shapes. In the top left, a thin grey line extends from the edge and ends in a small grey dot. On the right side, there are overlapping diamond shapes in dark teal and yellow, with white borders. At the bottom, there are thin grey lines forming a series of connected hexagonal shapes, and a dashed grey arc on the left side.

# **A DEEPER DIVE:** **DROPOUT RATES**

By: Samira Chatrathi

# About Me



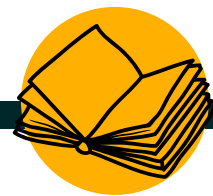
**Samira Chatrathi**

**Data Scientist**  
**Linkedin | Github**

# Agenda



***Business Understanding***



***Stakeholder***



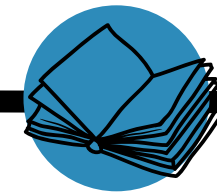
***Data Understanding***



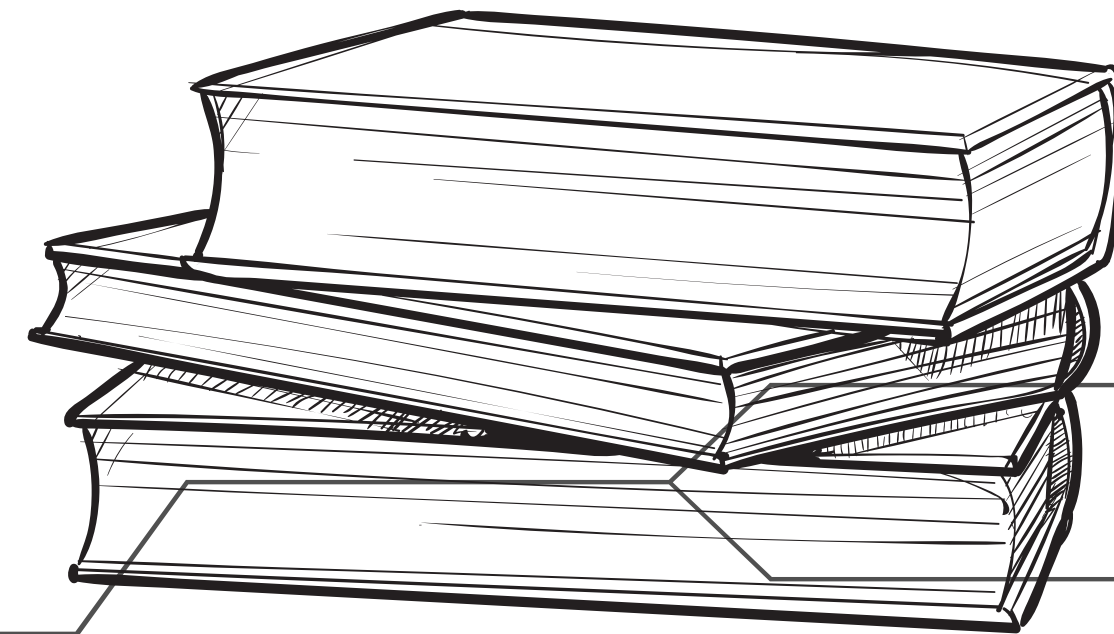
***Modeling***



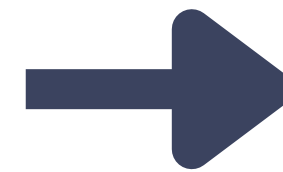
***Recommendations***



***Future Implementation***



# Business Understanding



**SmartyScholars Program**

# Stakeholder

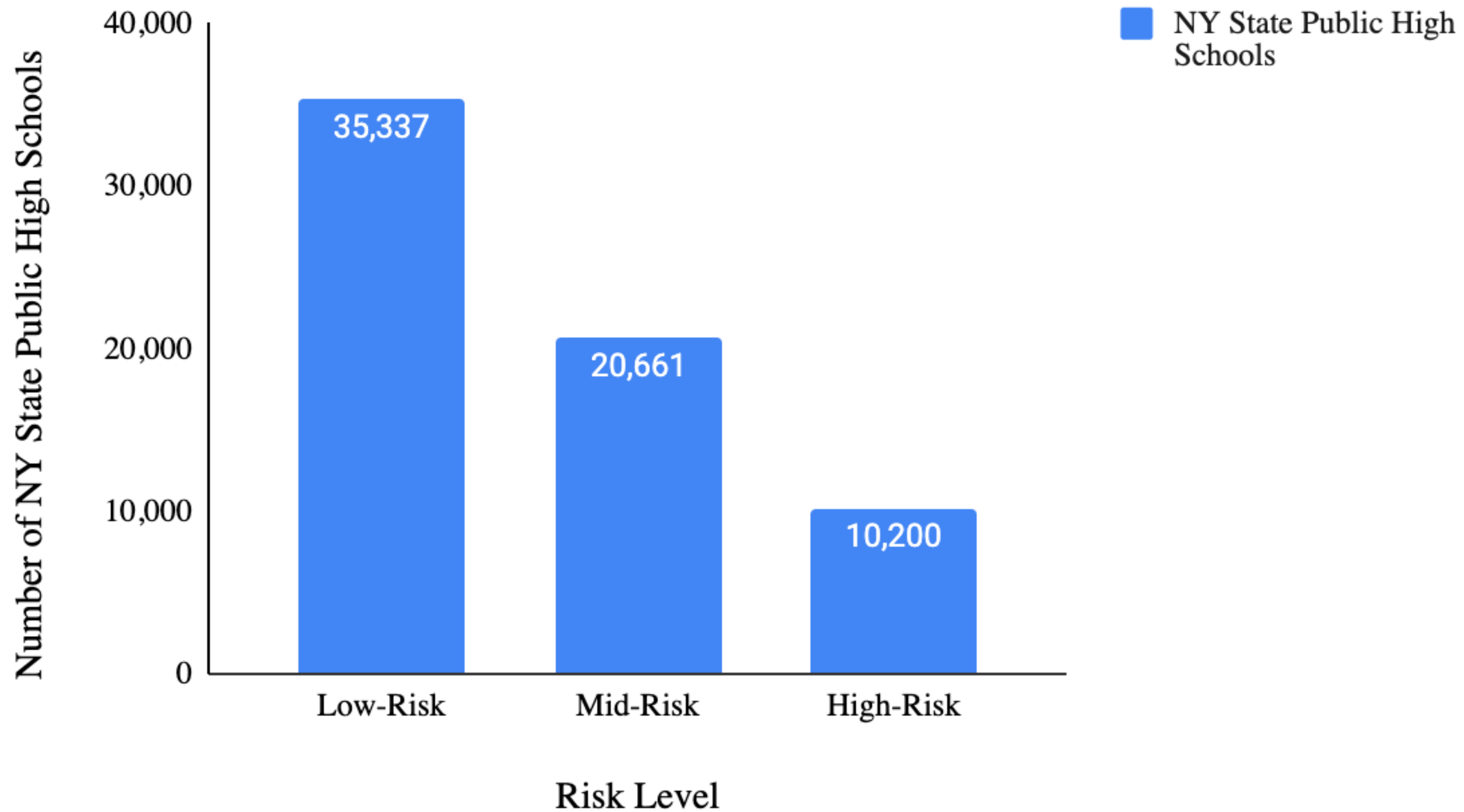
**CULTURALLY  
RESPONSIVE-  
SUSTAINING  
EDUCATION**



New York State  
**EDUCATION DEPARTMENT**  
Knowledge > Skill > Opportunity

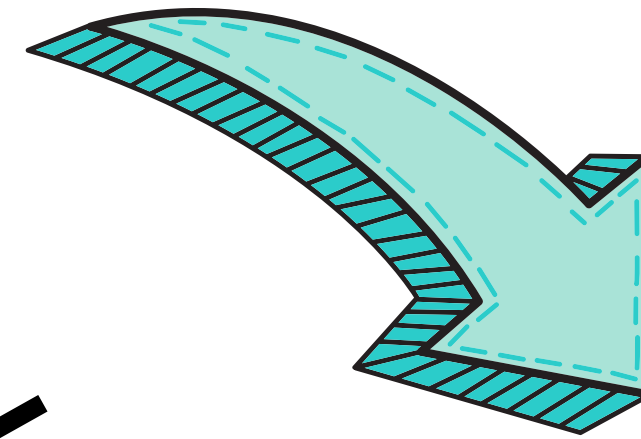
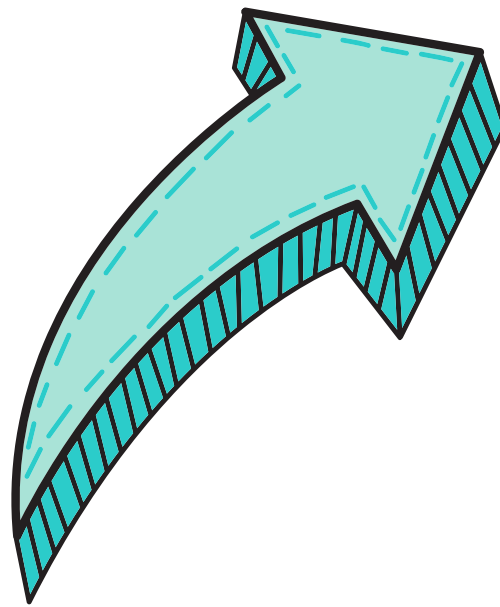


## Risk Levels for New York State Public High Schools ('12-'16)





Model Prediction



K-NEAREST NEIGHBORS

73%

MODEL PRECISION

Feature Importance

Actionable Insights



# Recommendations



**Invest in Low-Risk Practices**



**Promote Language Diversity within Curriculum**

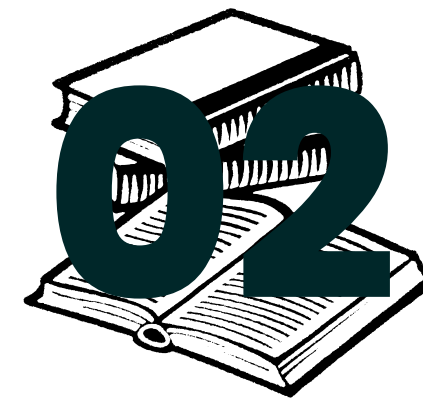


**Monitor High-Risk Schools**

# Future Implementation



**Incorporate Mental Health  
Feature**



**Compare Online Learning**



**Implement High School Risk  
Survey**