Student Loan Data Analysis

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Software Used:

Tableau 10.5

Star UML 2.8.0

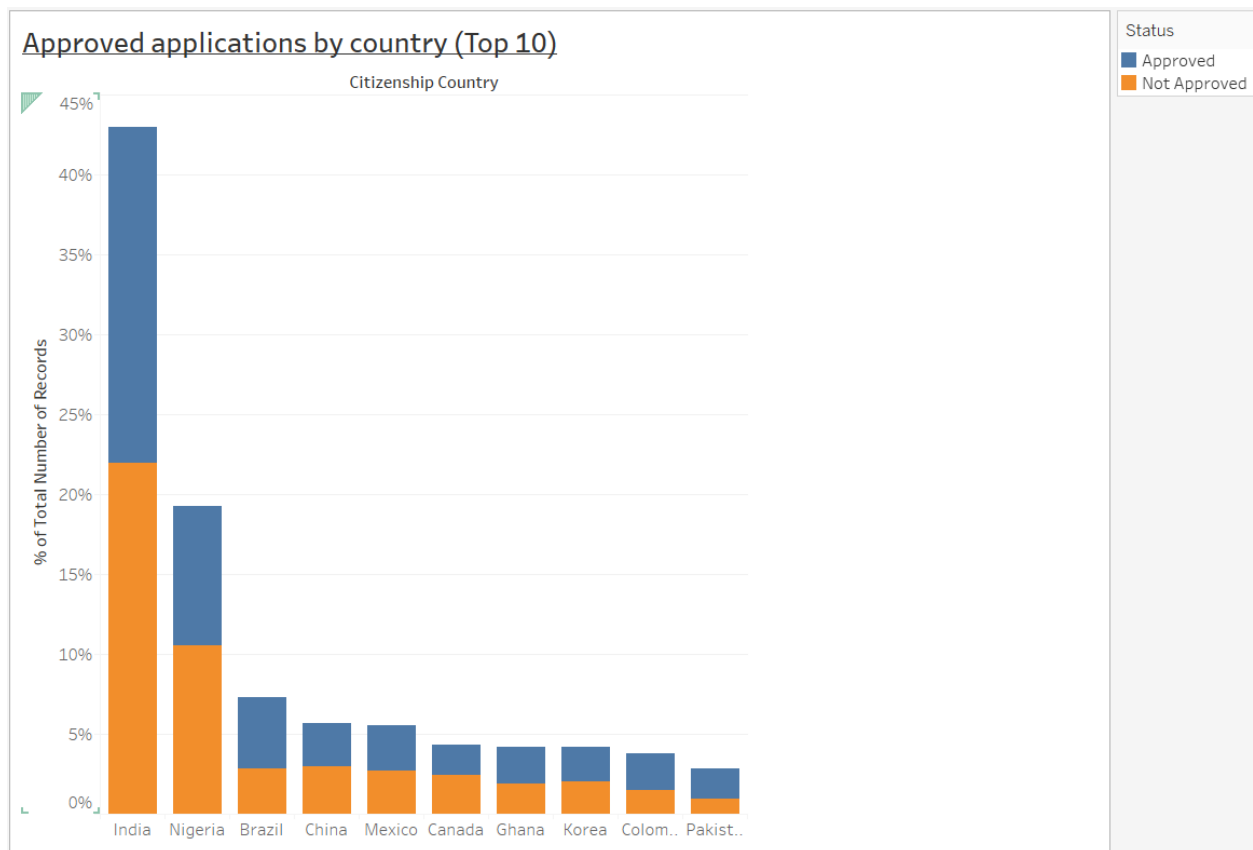**Data Attributes:**

Field	Table	Details
Opportunity ID	Loan Request	Unique ID for each loan Request
Contact ID	Loan Request, Borrower	Unique ID for each Borrower
Degree	Loan Request	Degree for which borrower is requesting MPOWER Loan
Application Review Time Stamp	Loan Request	Time Stamp which contains application review start date and end date and total time taken in minutes by MPOWER's credit team to review this application
School Code	Loan Request	School Code for which this loan was requested
Requested loan amount	Loan Request	Loan Amount Requested by Borrower
Interest Rate	Loan Request	Interest Rate approved for this loan
Anticipated Graduation Date	Loan Request	Expected Graduation Date for the program in which student is enrolled
Credit Score	Loan Request	Score calculated by credit team for this loan application (<=5: Not Approved, >5: Approved)
Status	Loan Request	Status of the loan Application
Approved Amount	Loan Request	Loan Amount approved by credit team
Citizenship Country	Borrower	Citizenship country of the borrower
Address - State	Borrower	Address State of the borrower in US

Approved monthly applications
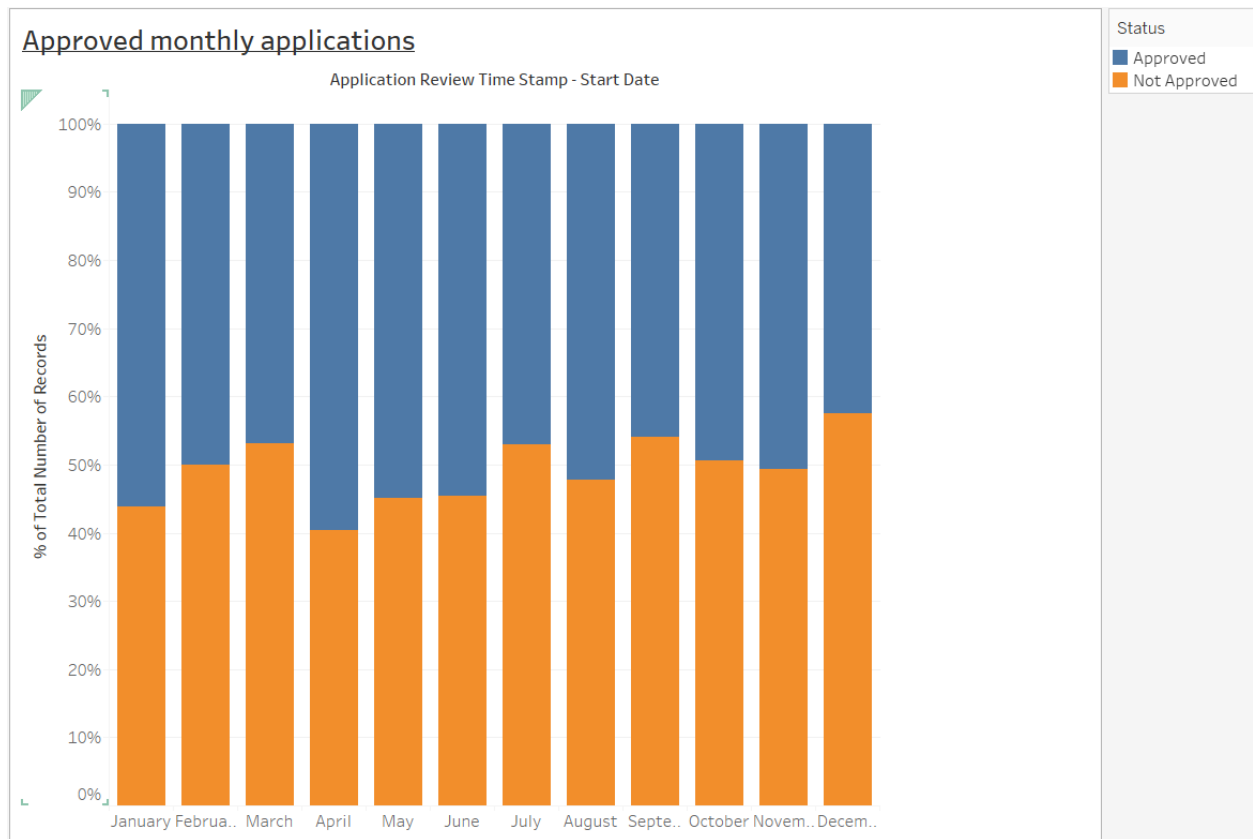
Based on the review start date, above bar graph shows percentage of approved applications for each month of 2017

**Attributes used:** Application Review Timestamp, Status

Analysis Role: Get monthly acceptance rate of loans and accordingly make profit estimates.

Approved applications by country (Top 10)

Based on country of Citizenship of the borrower (only top 10 countries by number of loan requests), above graph shows percentage of approved applications.

Attributes used: Citizenship Country, Status

Analysis Role: Identify countries which are huge markets and set service milestones.
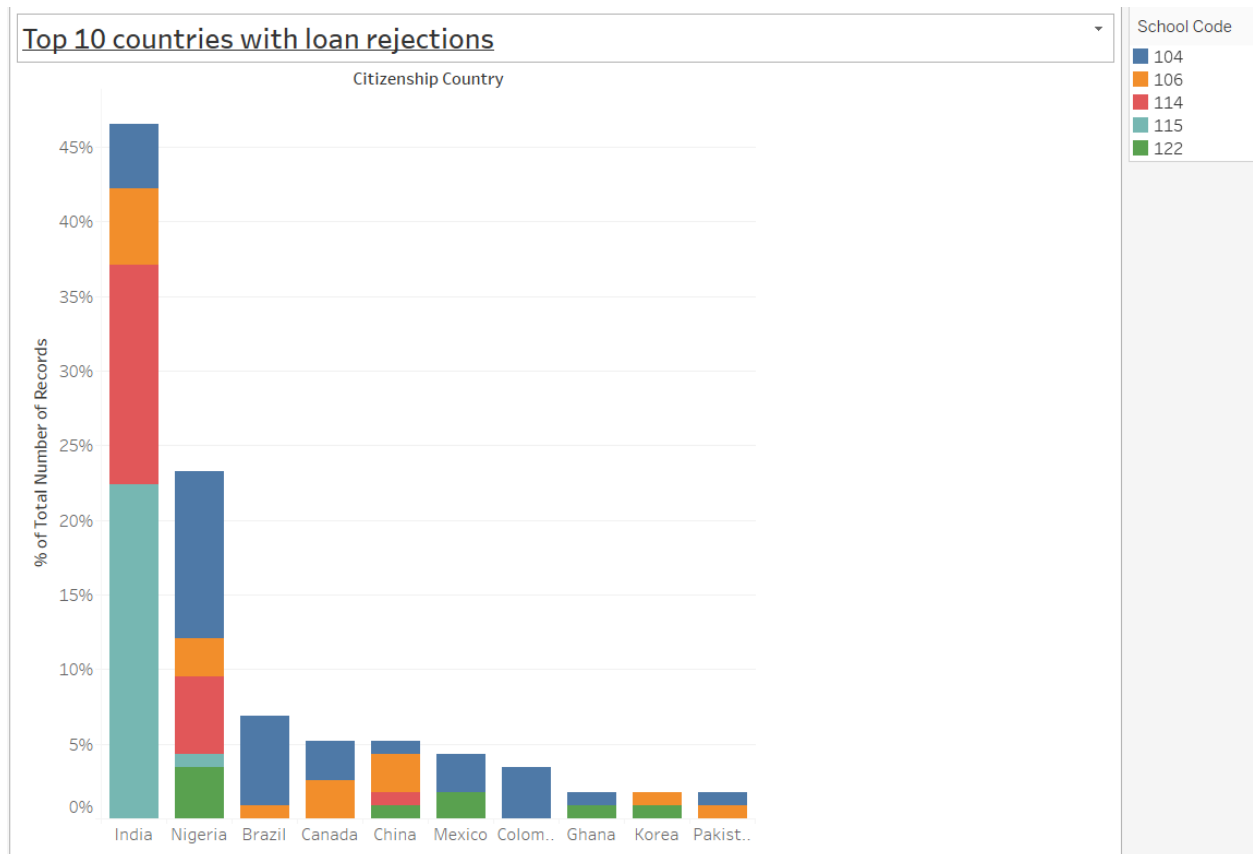
Above bar graph shows Top 10 countries with loan rejections and Top 5 schools within each country where students get rejected.
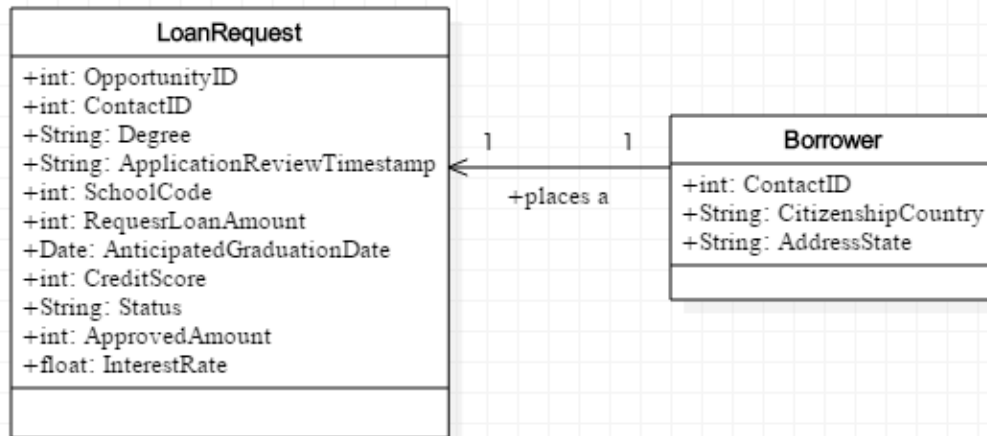
Attributes used: Citizenship Country, Status, School Code

Analysis Role: By identifying country – school code combination for rejected cases, we can identify student application trends and make business strategy changes to help lower this rejection rate.

This reduction can be brought by providing loan requesters a comparative analysis regarding which schools are too ambitious according to their profile and help them select schools accordingly.

This would eventually help students to enroll in correct schools and loan acceptance rate would increase.

Student Loan System: Class Diagram

LoanRequest

+int: OpportunityID
+int: ContactID
+String: Degree
+String: ApplicationReviewTimestamp
+int: SchoolCode
+int: RequesrLoanAmount
+Date: AnticipatedGraduationDate
+int: CreditScore
+String: Status
+int: ApprovedAmount
+float: InterestRate

1   1

+places a

Borrower

+int: ContactID
+String: CitizenshipCountry
+String: AddressState
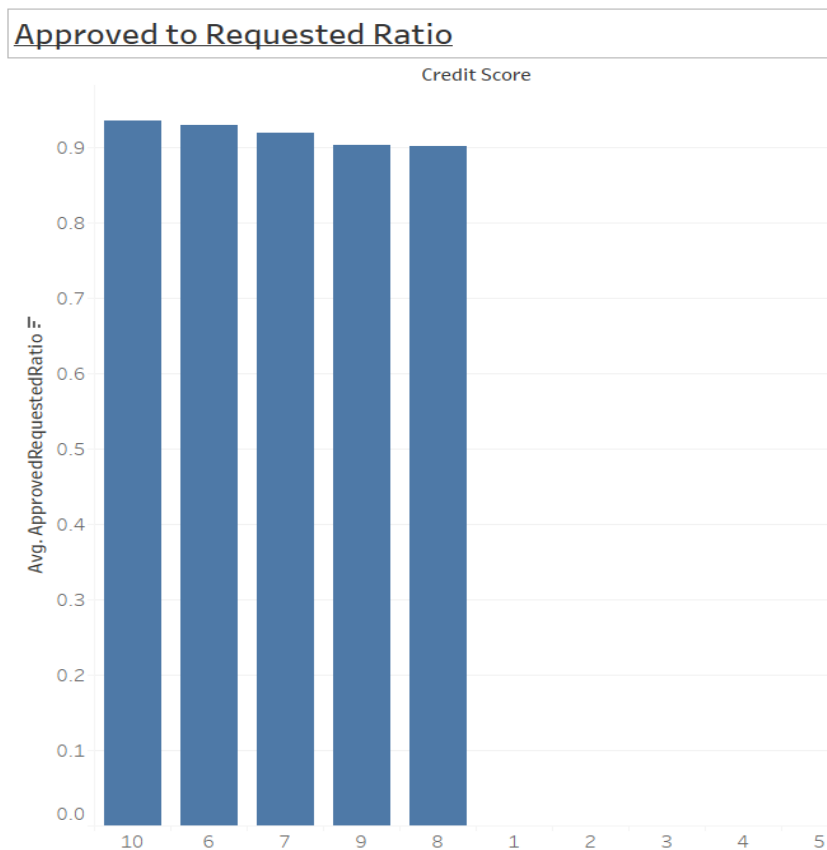
Fig: ER Diagram

Both tables can be joined using Contact ID field.

Each borrower has exactly one loan request.

Approved to Requested Ratio

Above graph shows average approved to requested ratio for each credit score.

Attributes used: Credit Score, Request Amount, Approved Amount

Analysis Role: Graph indicates that ratio is highest for max credit score.

But it's not always the case as credit score 6 has a higher average as compared to credit score 9.

There is a correlation between ratio and credit score, but not that tightly bound.

Dashboard

Approved monthly applications

Application Review Time Stamp - Start Date

Approved applications by country (Top 10)

Citizenship Country

Status
- Approved
- Not Approved

School Code
- 104
- 106
- 114
- 115
- 122

Top 10 countries with loan rejections

Citizenship Country

Approved to Requested Ratio

Credit Score

Calculating APR:

For 10005 Opportunity ID

start date	Jan-18
grad date	May-18
interest paid	1133.333333
total loan	18133.33333
total interest	2901.333333
apr	**17.06666667**

For 10008 Opportunity ID

start date	Sep-16
end date	Jun-18
interest paid	7700
total loan	37700
total interest	5278
apr	**17.59333333**