

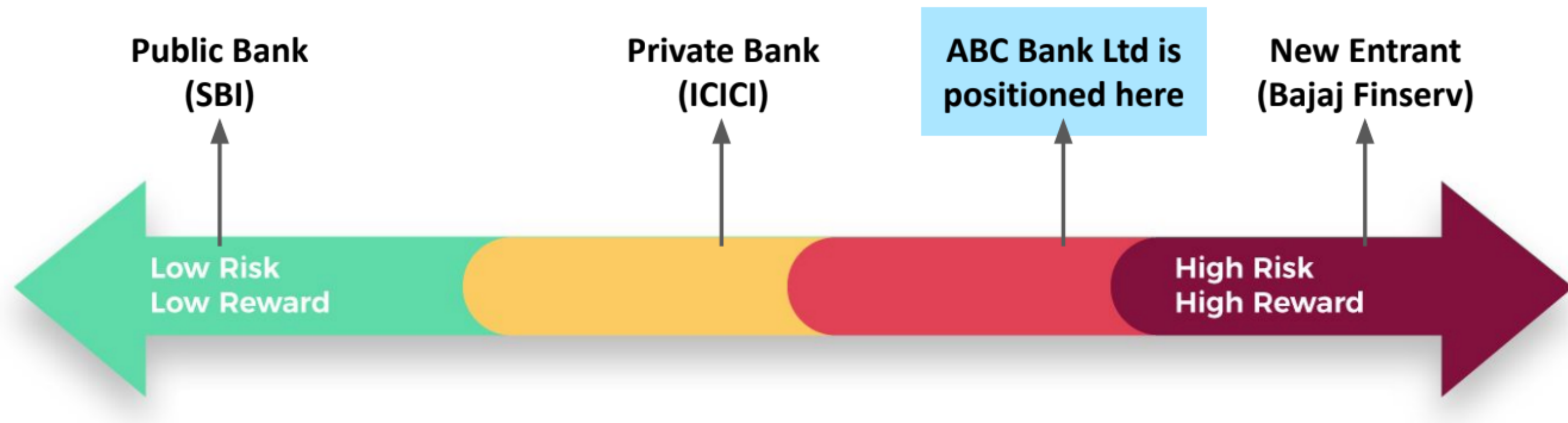
# CREDIT SCORING PROJECT FOR ABC BANK

AUGUST, 2023

# Business Case: Credit Risk Modelling

- ABC Bank Ltd. intends to build an in-house risk model to make lending decisions for subprime mortgages
- Business objective is to maximise profitability, given:
  - Profit from a good customer is \$100
  - Loss from a bad customer is \$500
- Bank has shared historical data on customers':
  - Credit bureau records
  - Loan outcomes (paid off or bad loan)

# Our understanding of the assignment



**Risk Minimization**

- Credit Scores - High
- Subprime Credit - No

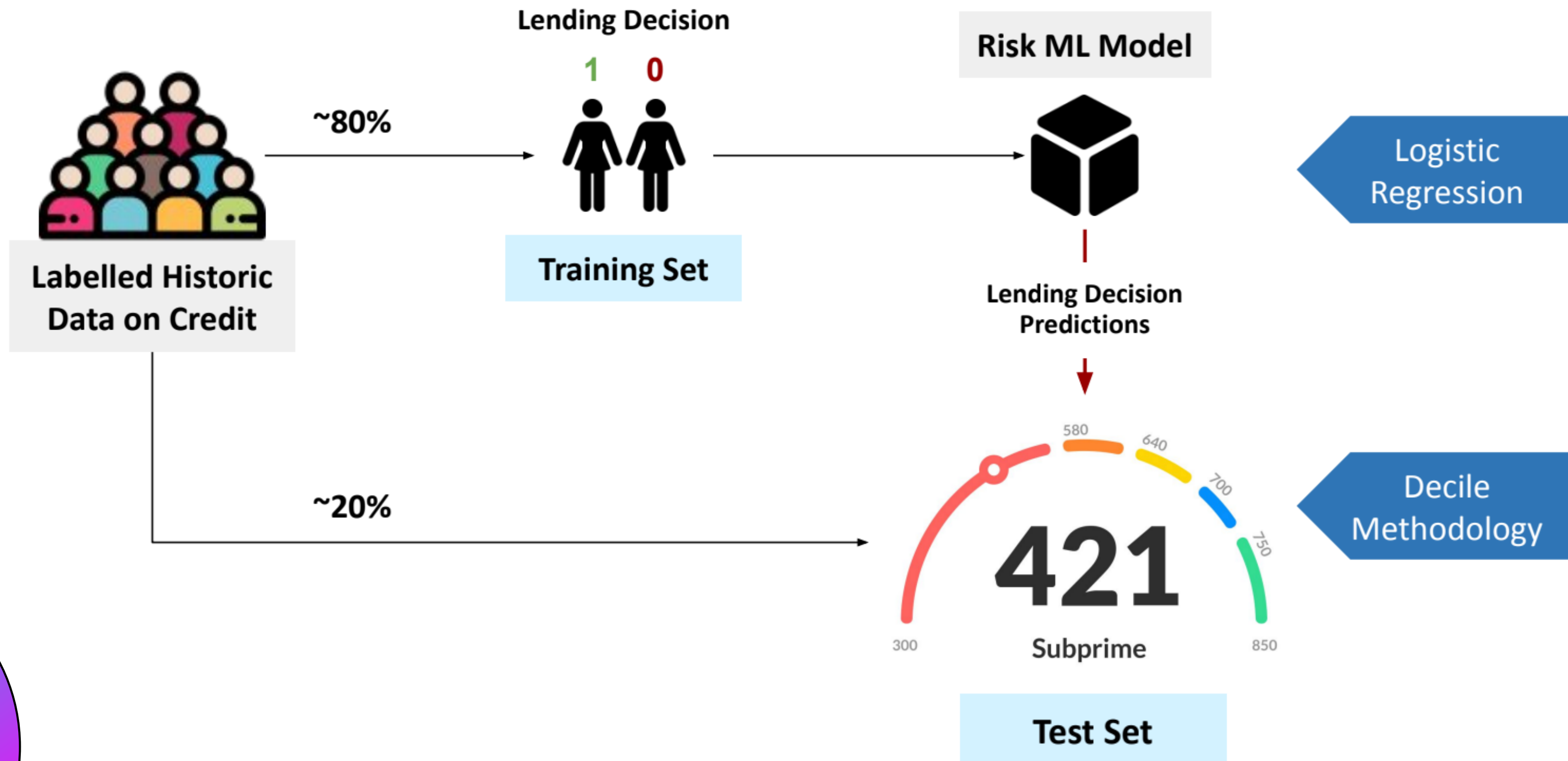
**Profit Maximization**

- Credit Scores - Optimal
- Subprime Credit - No

**Market Expansion**

- Credit Scores - Low
- Subprime Credit - Yes

# High-level solution architecture...



# Our approach



01

## Assumptions

- missing values imputed with mean
- customer ID excluded from analysis

02

## Trained a classification model, for

- predicting likelihood of loans being good/bad
- using Logistic Regression Classifier

# Deliverable #1: In-house Risk Model



Model accuracy achieved



Operational Cost to Business





# ABC Bank's Lending Strategy: Options

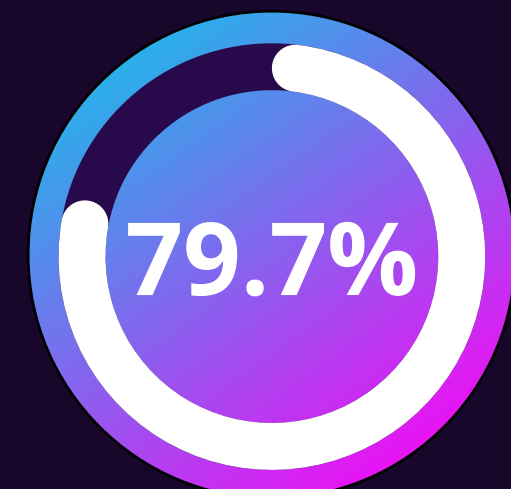
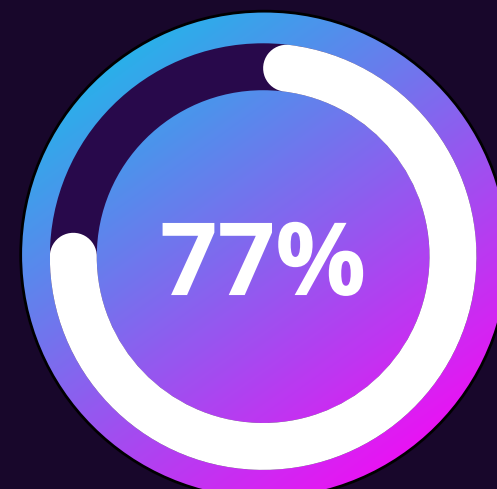
% of Good Loans predicted correctly	% of Bad Loans predicted correctly	Probability Threshold for Approvals
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Strategy for Profit Maximisation



Strategy for Profitability-cum-Market Expansion



**Rohit Raj**



# THANK YOU



[https://github.com/RohitRaj-03/Credit\\_Scoring\\_for\\_ABC\\_Bank\\_ml](https://github.com/RohitRaj-03/Credit_Scoring_for_ABC_Bank_ml)