Loan Application: To approve or Not?

Deciding whether or not to approve a loan application.

Presented By : Larana Corporate

Problem Statement

Yaspi, a digital lender seeks to offer credit services to customers.However:

- They have assurance if the applicants are able to repay the loans.
- Manually analyzing the applications is time consuming and prone to error.

They think it would be helpful to train a model that can automate the process, while predicting if an applicant qualifies for the loan or not.

Presented By : Dominic N Mugo

Goals

Training a model that predicts whether a loan is approved or rejected would save Yaspi, time and personnel resources. Moreover the model can be incorporated into their lending app, giving customers an instant response to their application.

Goals 1

To train models that takes in the applicants details and determines the status of the Loan.

Goals 2

To evaluate and select the best perfoming model to be incorporated into the lending system.

Goals 3

To determine the variables that best contribute to the loan status.

Solution or Strategy

We will use historical data for past applicants to train a classification model.

- Train 3 models on the data

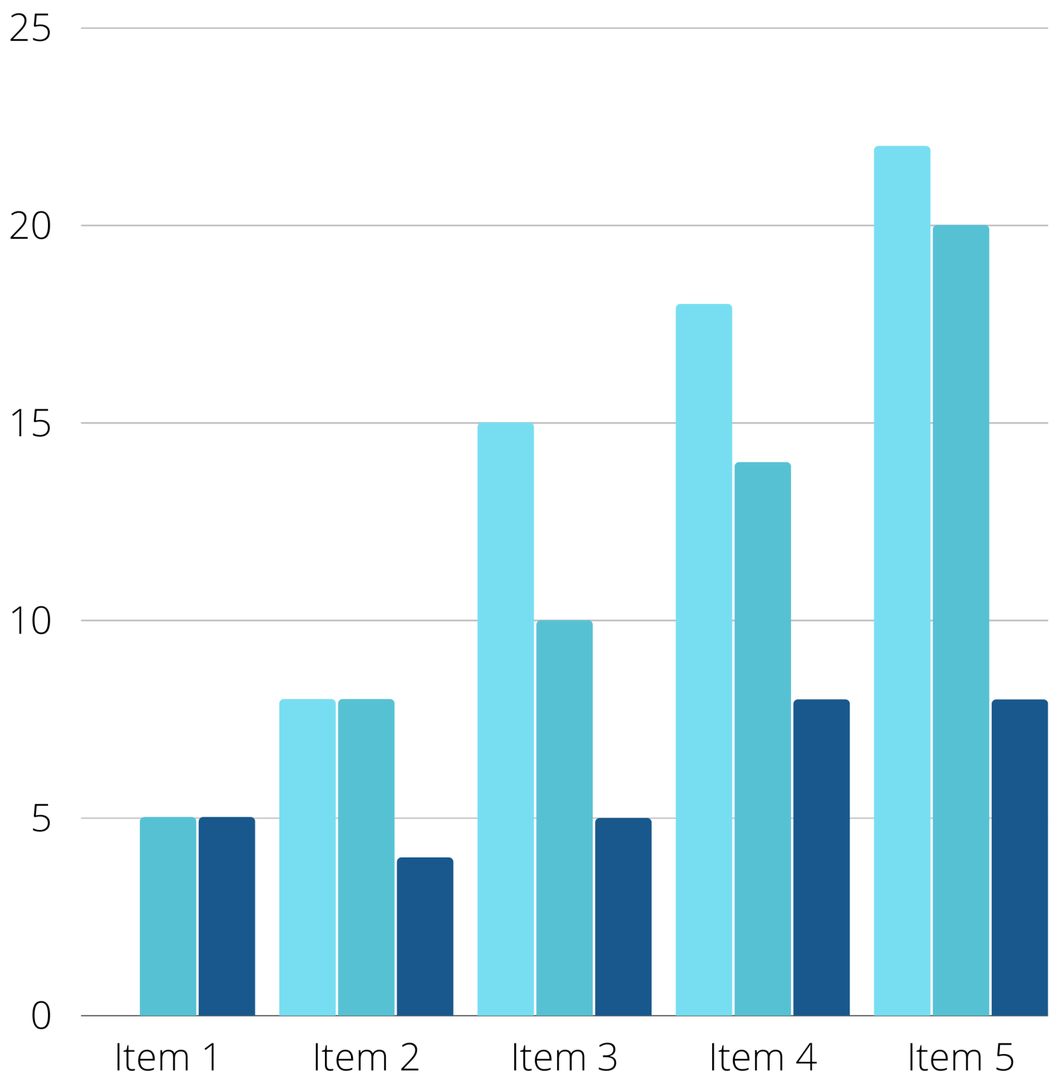
- Predict using the models and evaluate the performance, then give a solution.

Data at a Glance

The loan approval dataset is a compilation of financial records and related data that's used to assess a person's suitability for a loan from a lending institution. It takes into account a number of variables, including gender, marital status, no of dependants, education level, loan amount, credit history and others

Analysis

- Frame the problem
- Clean the data -check for missing values and ouliers
- Model the data
- Evaluate Models
- Tune models for optimization



Findings

Important Variables

- Credit History
- Loan Amount

Best Model

- An ensemble model is identified as being the best for inclusion into the lending app.

What can we improve?

- Fine tune the model

Caveats

- Few data records
- Possibility of overfitting using complex models

Conclusion

Nailed it!

We identified an ensemble model as the best for predicting whether or not a loan should be approved.

Win!

Yaspi is now ready for the digital lending space!

Future

Model can be fine tuned and keep learning from more of the data records.

The Team

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Presented by Dominic Njue