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# Data Science Project Proposal

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**BARNES & NOBLE**



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# THE HISTORY



Background



Sales Channel



Objectives

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# The Problem



IDENTIFICATION



CHALLENGES



IMPORTANCE

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# The Purpose of this Project



Goal: Predict customer churn for Barnes & Noble. Barnes & Noble can proactively identify at-risk customers and implement targeted retention strategies to mitigate churn rates.



Alignment with Business Objectives: Achieving the goal of predicting customer churn aligns closely with Barnes & Noble's overarching business objectives of enhancing customer satisfaction and optimizing revenue.

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# CRISP-DM Process



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# Business Understanding

Understanding Barnes & Noble's objectives:

- Improving customer retention
- Optimizing inventory management
- Enhancing marketing strategies

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# Data Understanding and Preparation

Data  
Sources:

Customer  
Transaction  
Date

Website  
Interactions

Customer  
Surveys

Membership  
Data

Date  
Preparation:

Data  
Collection

Data  
Cleaning

Feature  
Engineering

Data  
Integration

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# Modeling Selection & Justification

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## MODELING APPROACH

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Classification Modeling

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Regression Modeling

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## JUSTIFICATION

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Suitability for Business Problem

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Availability of Data

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Interpretability and Scalability

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# Evaluation Strategy

## Evaluation Metrics:

- Accuracy
- Precision
- Recall
- F1 Score

## Validation Techniques:

- Holdout Validation
- Cross-Validation

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# Deployment

Implement Models

Integration

Performance Monitoring

Value Continuation

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# Risk Assessment: Environmental Factors



SPONSORING  
BUSINESS



SPONSORING  
EXECUTIVE



BUSINESS  
PROCESS



DECISION  
SUPPORT CULTURE



KPIs



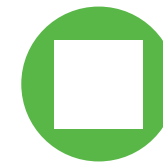
VALUE  
PROPOSITION



RESOURCE  
AVAILABILITY

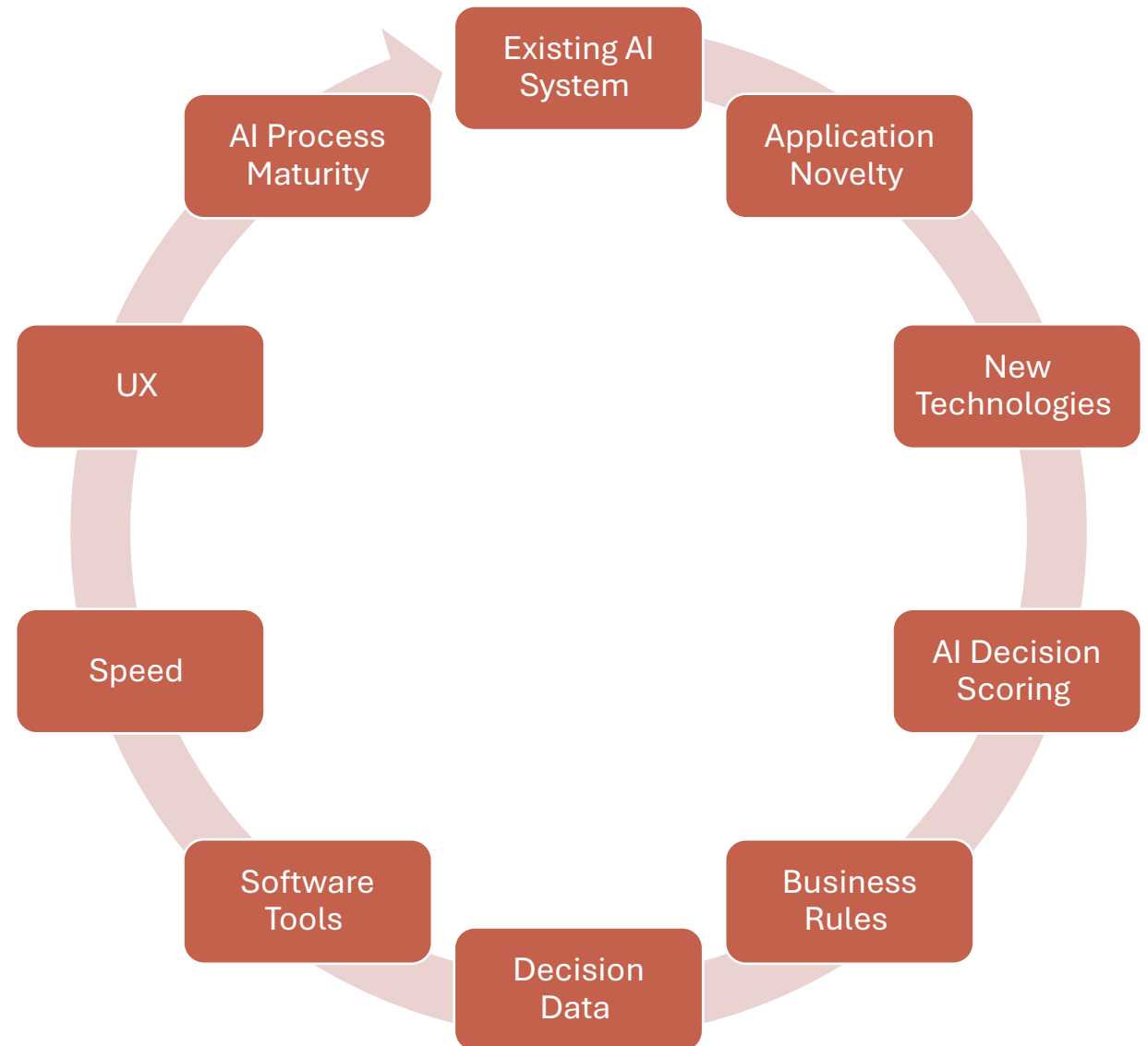


USER  
ENGAGEMENT



DECISION SCOPE

# Risk Assessment: Technical Factors



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## Next Steps:



Outline responsibilities and roles of personnel involved



Encourage feedback and collaboration of ideas from stakeholders



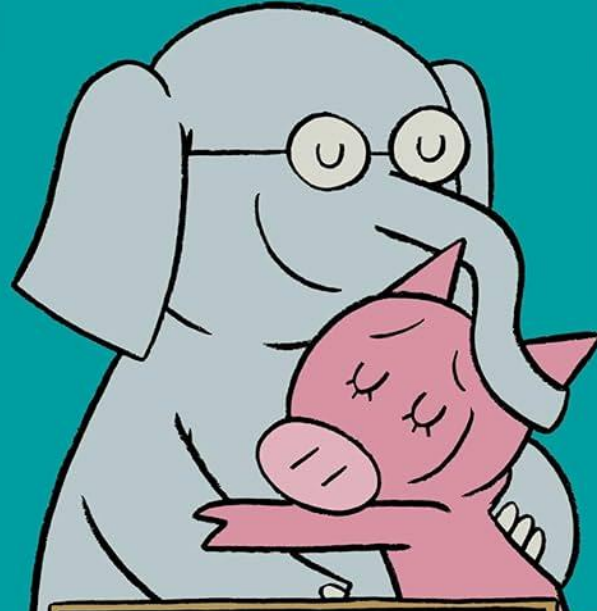
Refine project details to meet the standards of Barnes and Noble and the core team



Estimate budget

An **ELEPHANT & PIGGIE** Book

# The Thank You Book



By **Mo Willems**