

# README – IA Project: Churn Rate Prediction

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## 1. Project Overview

This AI project aims to predict the churn rate for the European telecom company Datalabel. The main goal is to determine whether it is more profitable to retain existing customers or acquire new ones, and how to prevent client attrition. The solution includes a machine learning algorithm for classification-based prediction and a Power BI dashboard for data visualization.

## 2. Technical Approach

### - Algorithms Used:

- Random Forest (supervised classification): to detect churn risk in real-time.
- Word2Vec (semi-supervised): to extract key patterns and reasons for churn.

### - Pipeline Steps:

1. Data cleaning and feature engineering
2. Model training, testing and optimization
3. Dashboard development and integration
4. Training materials and team onboarding

## 3. Team & Roles

- Data Analyst (internal, 3–5 yrs exp): Data cleaning, feature selection, dashboard creation
- Data Scientist (internal, 3–5 yrs exp): Model development and monitoring
- Product Owner (internal, 3–5 yrs exp): Project management and client coordination
- Data Engineer (external, 3–5 yrs exp): Pipeline deployment, integration, technical support

## 4. Timeline

The MVP is scheduled for delivery on November 25, 2024. Weekly iterations cover:

- Data cleaning and feature selection
- Model development and evaluation
- Dashboard creation
- Training and documentation

## 5. Risk Management

- Data quality and governance issues (GDPR compliance)
- Model bias and low explainability
- Lack of cross-team communication or project scope drift
- UX/Adoption issues with the final dashboard
- Insufficient or unclear training/support documentation

## 6. Budget Estimation

Estimated total cost: €6000–€6695

- Internal resources (DA, DS, PO)
- External Data Engineer
- Minimal software licensing (e.g., storage, JIRA)
- Contingency buffer (15–30%)

## 7. Training & Documentation

Training is organized weekly with detailed PowerPoint guides, real-time support (Slack channel), and feedback loops. Final user documentation covers:

- Project scope and objectives
- GDPR and AI Act compliance
- Machine learning basics and explainability
- Importance of churn mitigation
- Q&A support system

Thank you for reviewing this README.  
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