

# Reimagine the future of **Telco.**

With the exponential growth of data, there's a huge underlying potential to apply AI techniques and tools to transform data into actionable insights.

**There's probably more in your data than what meets the eye.**

## Our Solutions for **Telco.**

Data Science and Engineering can be applied in Telco in order to help companies achieve better decisions, optimizing their operation and reducing customer churn. From recommender systems to customer call prediction, it is possible to leverage on internal and external data for better performing models.

# +3M

## Customers Analyzed

Our team is carefully curated to be able to assist in your data problems.

There's probably more in your  
data than what **meets the eye.**

# Telco Debt Management

## The Problem

Most telco companies have to manage the debt of their customers. This is a really important part of the business as having a large portfolio of default customers can cause significant disruptions in business operations.

In these situations, the main goal of telco companies is to recover most of the money that the customer has not been paying, but also understand if the customer represents a significant liability. Additionally, as collections are not the core business of these companies, there are limited resources to handle these types of scenarios.

In our project, our customer wanted to predict what was the level of “liability” of their client, according to different levels:

- Customers that should receive a “special payment plan” with high likelihood of recovery.
- Special cases with multiple outcomes that require manual analysis by internal teams.

We proposed solving this problem using a supervised learning approach to find the special cases and flag them to internal teams.

## The Project

### What

Predicting Customers who have low change of debt resolution and need further analysis from commercial teams.

### Why

Smart Manage Customer Indebtness

### How

LightGBM (Boosting Model) with historical information about the customer that predicts customer “non-viable” outcome. Top 5% customers more likely to be a “lost cause” will be sent to commercial teams for further analysis.



Around 130 thousand customers analyzed every day.

### Achieved Results

With this framework, we’ve achieved significant improvement in debt resolution for our customer.

With this model, they are able to process large amounts of information and use it to allocate resources to the most problematic “clients” that are likely to become a complex situation.

# Recommender System

## The Problem

Due to the high dimensionality of Telco customers characteristics, it is extremely hard to offer relevant new services or offers at the right time to existing customers.

Our telco customer had several issues with outbound cross-sell and up-sell campaigns. Cold calls had a very low success rate and were even considered “intrusive” by current clients.

Two factors had to be prioritized:

- Whom to call;
- Which offers should be proposed to which customer.

These two challenges could be solved using a Recommender System supervised approach that took into account historical data from the client but also inherent product characteristics.

## The Project

### What

Recommender System to recommend new products to existing customers

### Why

Improve cross-sell and up-sell success rate.

### How

Parallel Recommender System built using XGBoost to obtain the probability of a specific customer buying a set of products. On top of the probability, a set of business rules are calculated to ensure financial viability and ROI.

### Achieved Results

Achieved significant improvement of lift for both up-sell and cross-sell offers. Using a supervised model instead of a pure recommender system approach was a success due to a successful grouping of the customer products based on its characteristics.

# 5 p.p.

**improvement of lift**  
regarding cold call offers.

CASE STUDY #03

# Call Center Relapses

## The Problem

Around 30% of customer technical calls relapse. This is a significant problem for telco companies as it increases churn likelihood, impacts top line financials and lowers customer satisfaction.

Our customer had a simple heuristic that selected a certain amount of customers based on past technical calls to do follow ups on the week after. They were not aware how many false positives they were generating and how many of their customers would relapse if no action was taken.

They knew that they could benefit from non-linear patterns in their data and add more features that could improve the predictability of relapses.

## The Project

### What

Predictive Model that selects most likely customers to call multiple times for technical reasons.

### Why

Avoid customer unhappiness and route technical teams.

### How

Boosting model that selects top customers more likely to have a relapse from a technical call. The model uses information about the customer that involve complex time series .

### Achieved Results

Our customer was able to pro-actively call their clients, avoiding customer unhappiness and likely churn. With the model, they can now select top 500 likely customers to relapse from previous day technical calls - all of this is done by crunching huge inputs of unorganized and messy datasets requiring robust data pipelines and orchestrators that can feed data at d-1 to the automated system.



# About DareData & How We Can Help

## About DareData


DareData Engineering is an expert Data & AI technology consulting company. We have contributed to high value-added initiatives across diverse industries and sectors from design and concept stages to large-scale implementation and operation using the latest cloud and open-source technologies. We value talent, agility, and the ability to execute as part of what makes us different.

We are an asset in the upcoming challenges involving the digital transformation of organizations.

**Get in touch** to talk about your organization's plans for the technological future:

 <https://daredata.engineering>

 [contact@daredata.engineering](mailto:contact@daredata.engineering)

 (+351) 932 174 951