

PREVISION.IO

Smart decisions create a better world

Lifecycle of a Machine Learning project – From Design To Production

Tales of the The Business User, The Datascientist and The IT

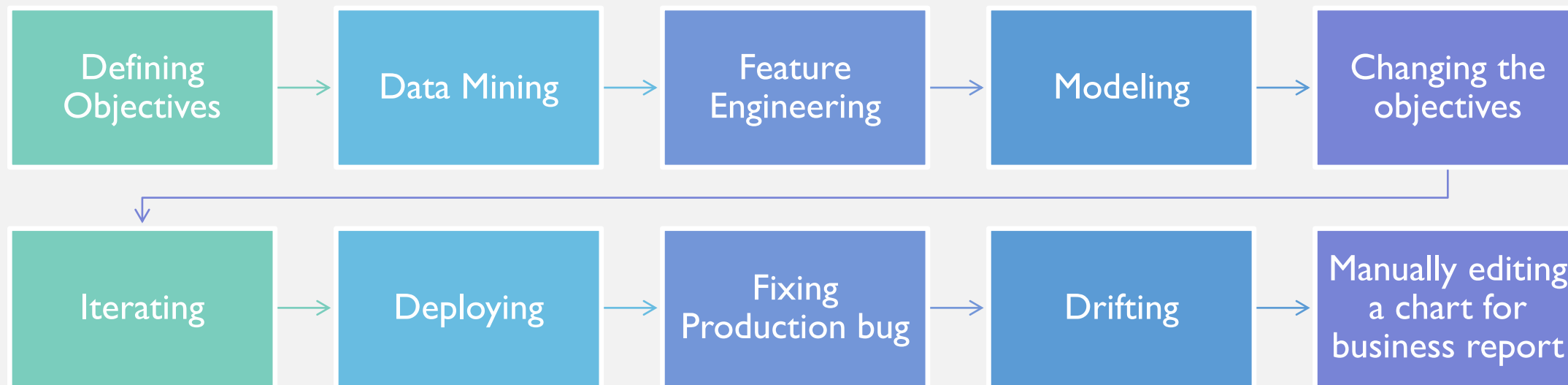
MACHINE LEARNING PROJECT – DATASCIENTIST VISION

Feature Engineering

Modeling

Hyper Opt

MACHINE LEARNING PROJECT - REALITY



1. BEFORE

The business user



I. DEFINING
OBJECTIVES

01

« Do IA »

02

« Valuate
data »

03

« Build A
Datalab »



I. DEFINING OBJECTIVES





2. DATA
MINING

« Just connect to
the datalake »



2. DATA-MINING

Find the list of all company databases

Get credentials

Beg IT for access

Retreive some CSV in an FTP server

Or an amazon S3

Or a google bucket

Code some scrapper

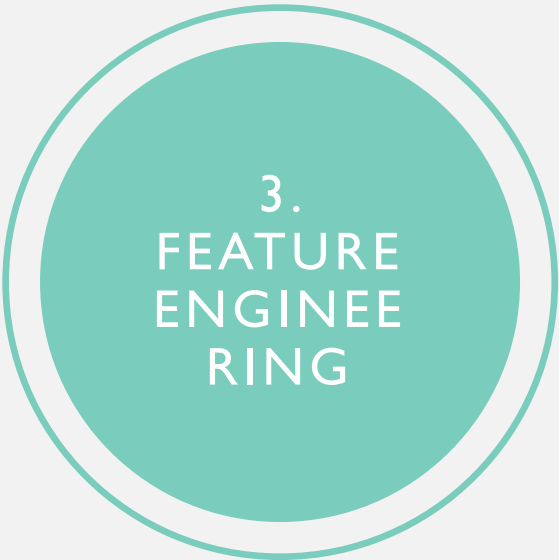
Use open dataset

Clean open dataset

Throw away open dataset

JOIN on non identical index

Clean the index



3.
FEATURE
ENGINEERING
RING

Solving encoding
issue

Filling Missing value

Solving datetime
issue

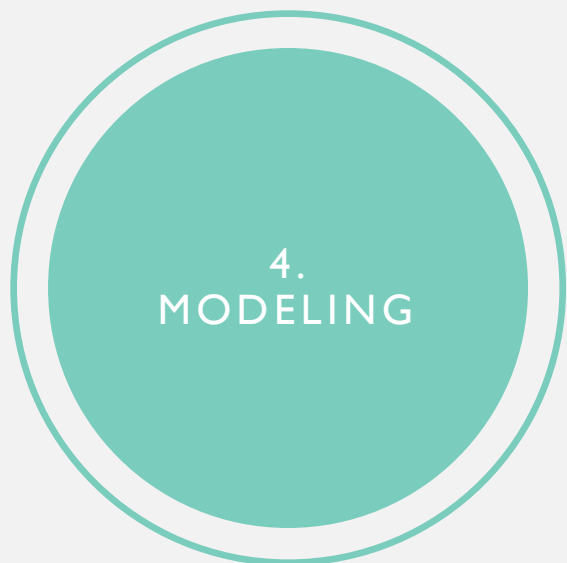
2. DURING

The Data Scientist



4.
MODELING

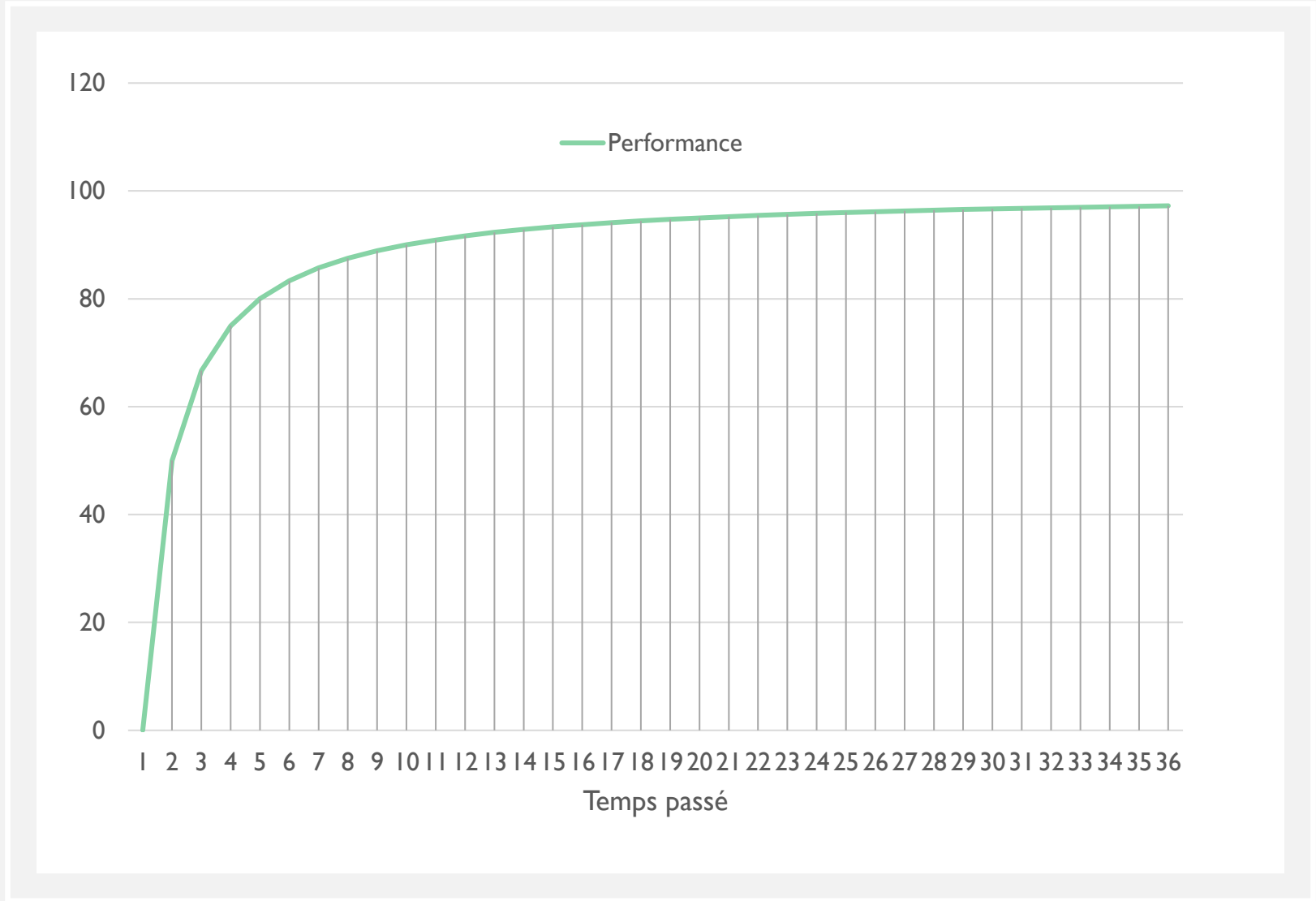
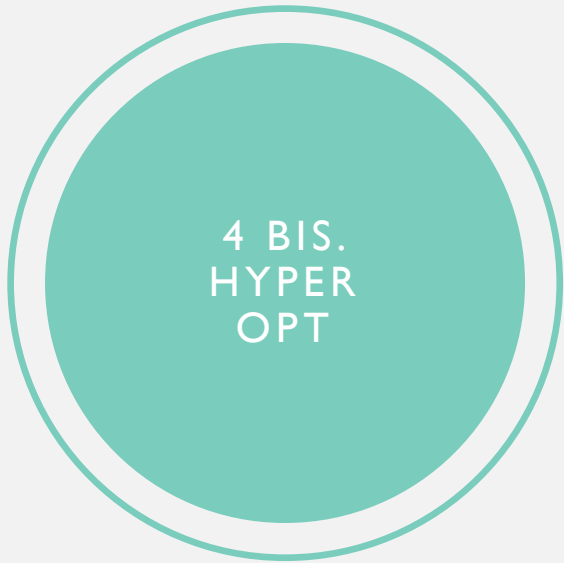
« oh this new
Research paper is
very interesting. Look
forward to try it »



4.
MODELING

Ok XGB thx
bye

Random
Forest is
good enough



3. AFTER

The IT

5.
CHANGING
THE
OBJECTIVES

« We know each customer that gonna churn when he calls us to stop his contract »

The model said that
« a call for stopping all contract » is a strong predictor of churn

5.
CHANGING
THE
OBJECTIVES

In fact, calculating
the ROI vs the
Actionnable is the
most important part



With each new model
comes a new idea

Target slightly adjust

Estimation of metric ROI
evolves

7.
DEPLOYING

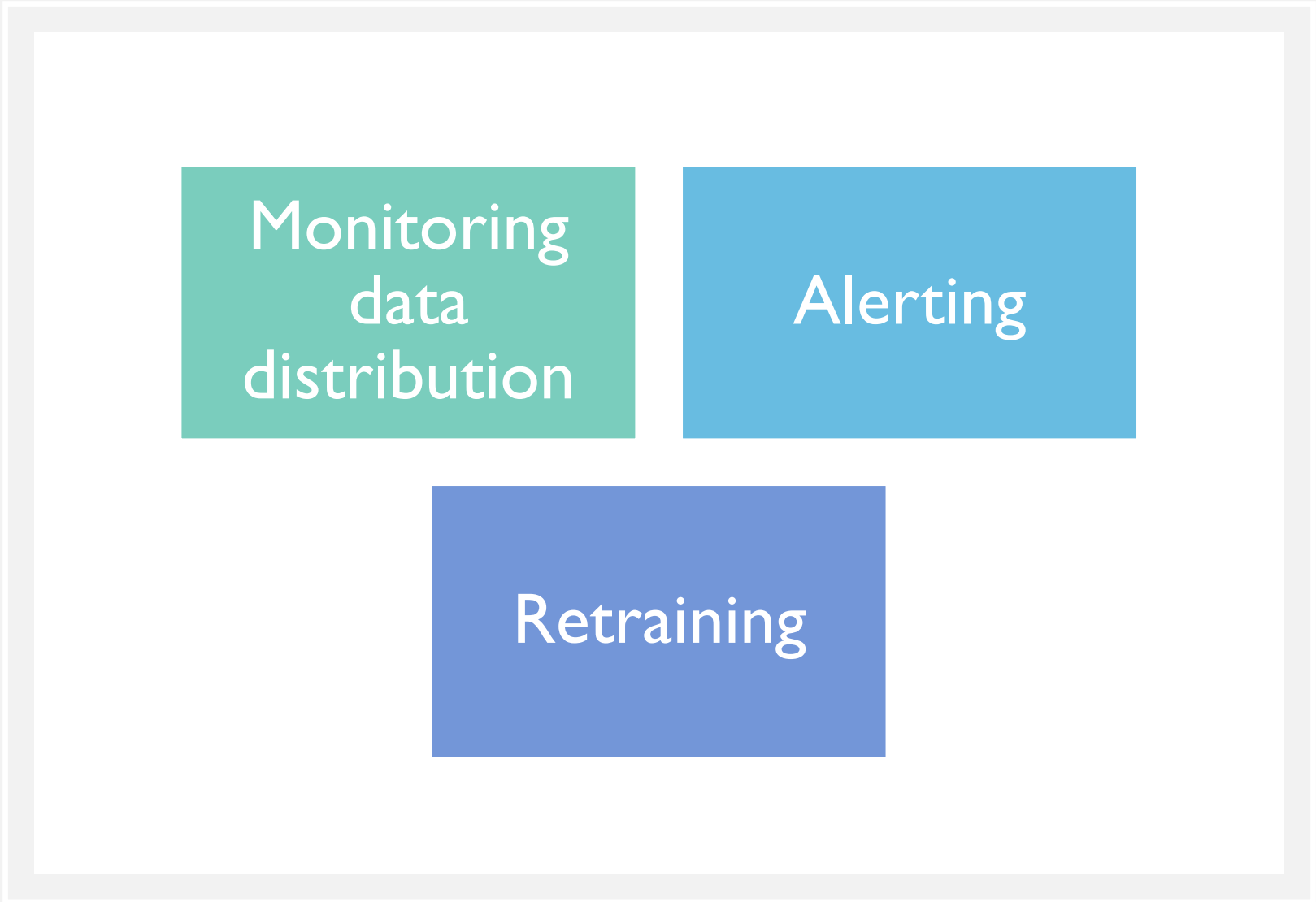
« Dockerfile ?
What
Dockerfile »

« which port
do you listen
to ? »

8. FIXING
PRODUCTION
BUG

Good Guy
DataScientist is
not software
Engineer

9. DRIFTING



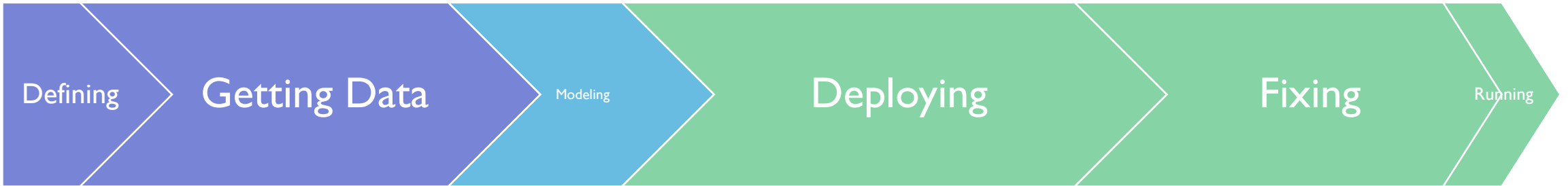
FINALLY.
EDITING AN ANALYTIC CHART
FOR BUSINESS REPORT

Expected

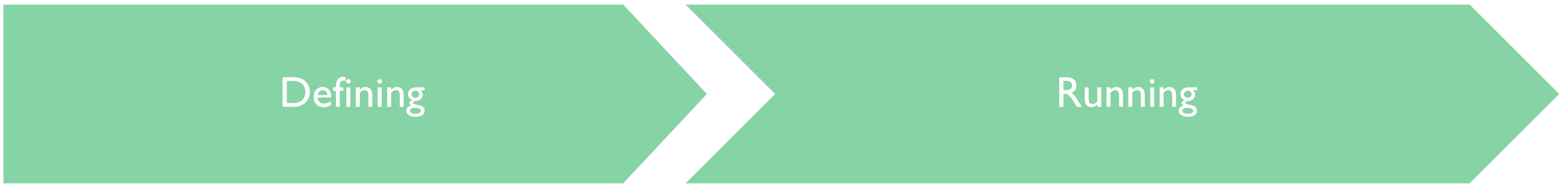
22



Reality

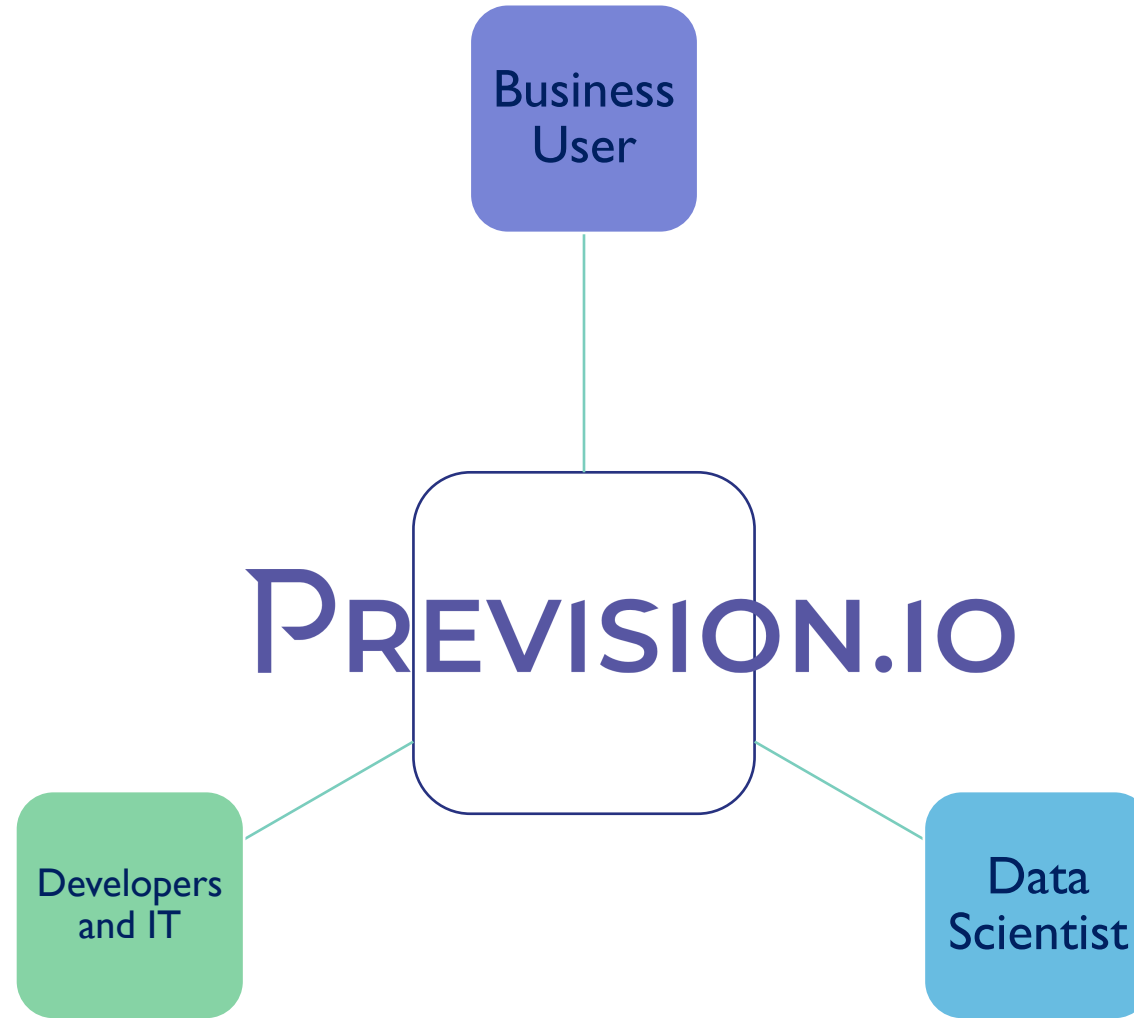


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