



# ProfitAI MLOps

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## Boston Houses Sales

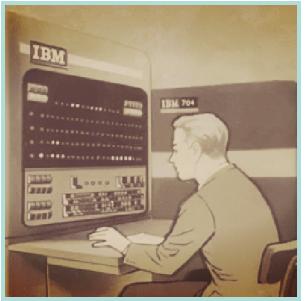
Company Located in The USA. The company have data about home sales and they desire to predict the price of the next home sale



## French Motor Insurance

The company want to use their data to predict how often a driver will file an insurance claim in a year

# Target



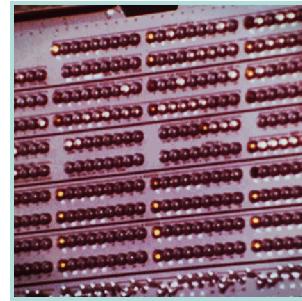
## Purpose

Develop ML Pipeline model to predict  
the business goals



## Non Data Set Specific

The Pipeline should automatically adjust  
itself to each one of the data sets

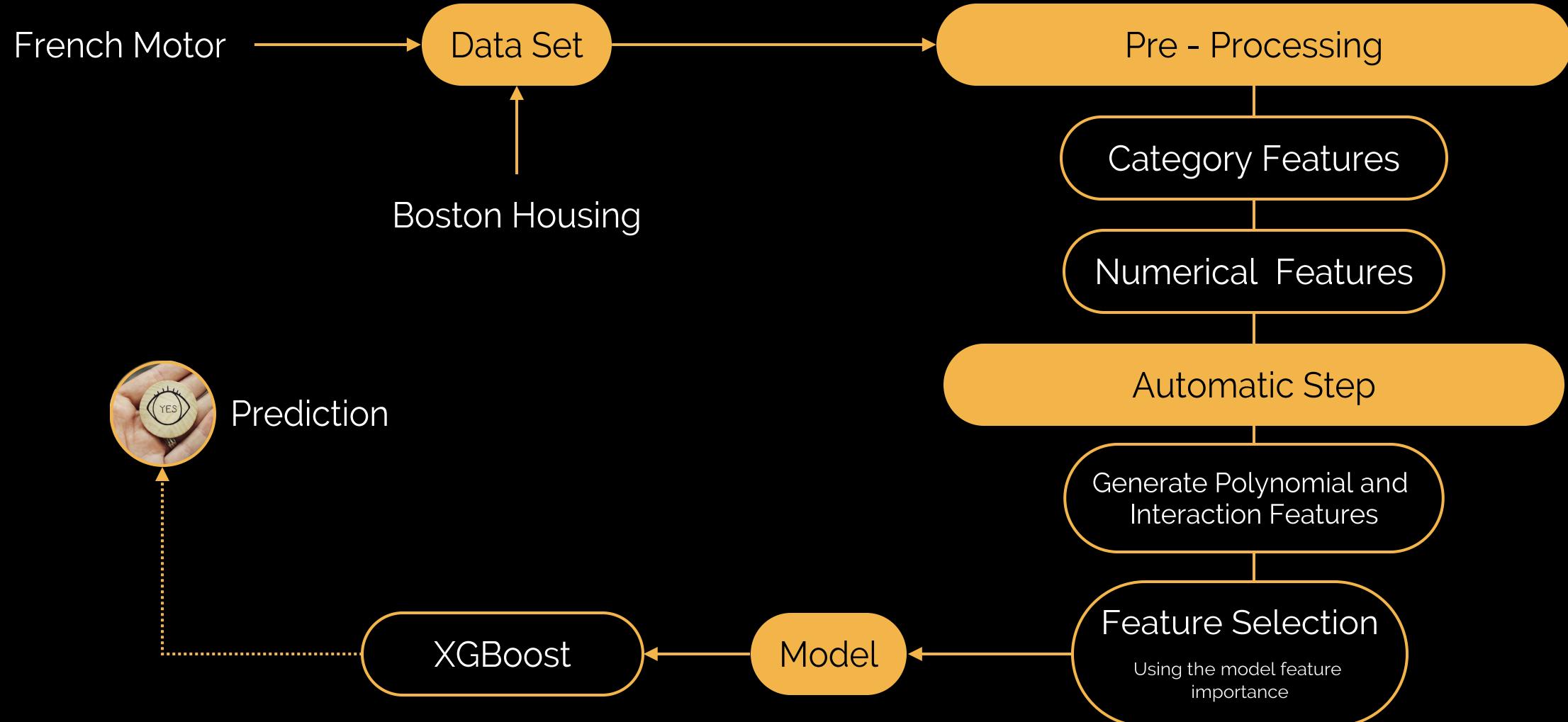


## Automatic Steps

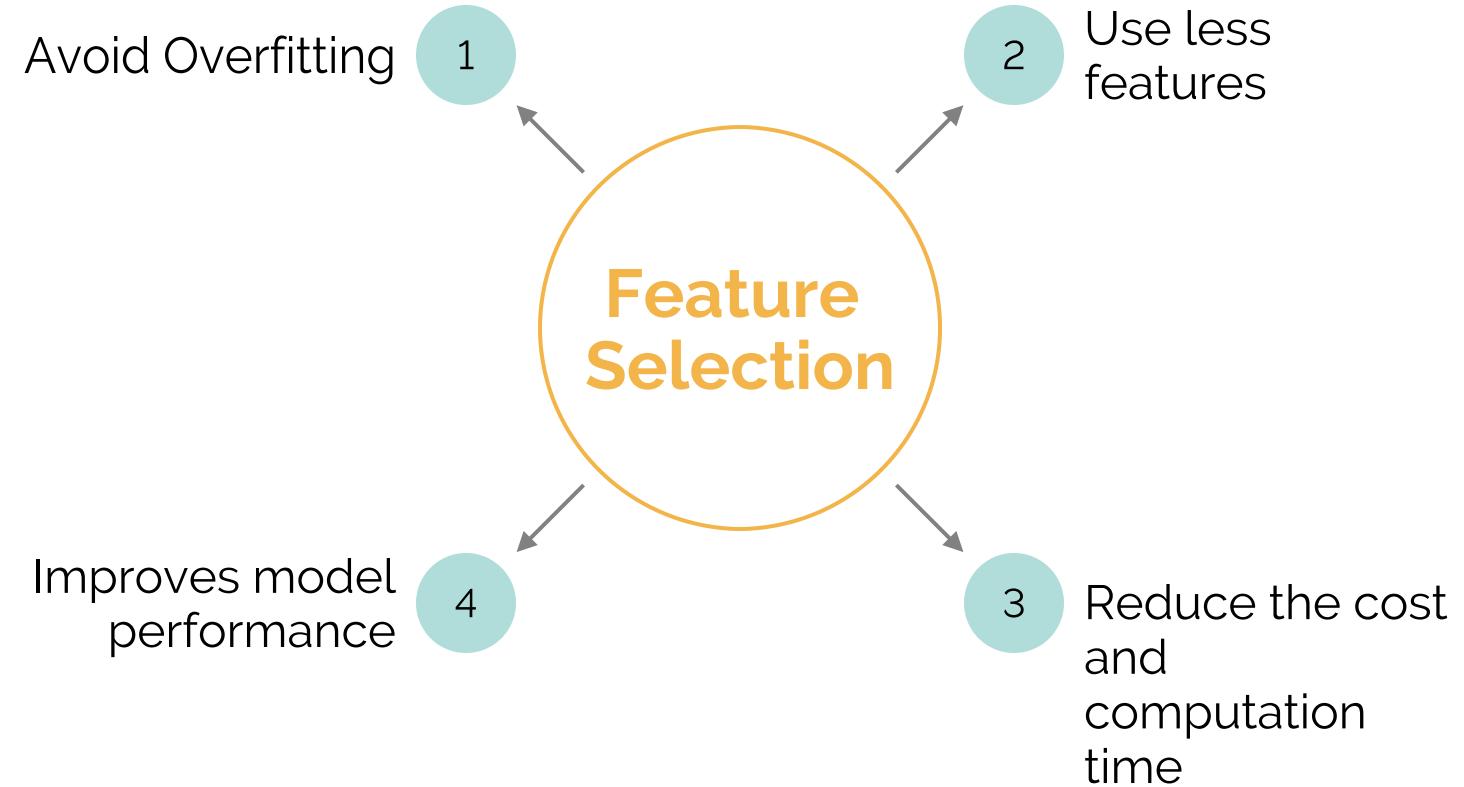
The pipeline has a step of generating  
Polynomial and Interaction features.  
Moreover, we are adding another step of  
feature selection.

# Architecture

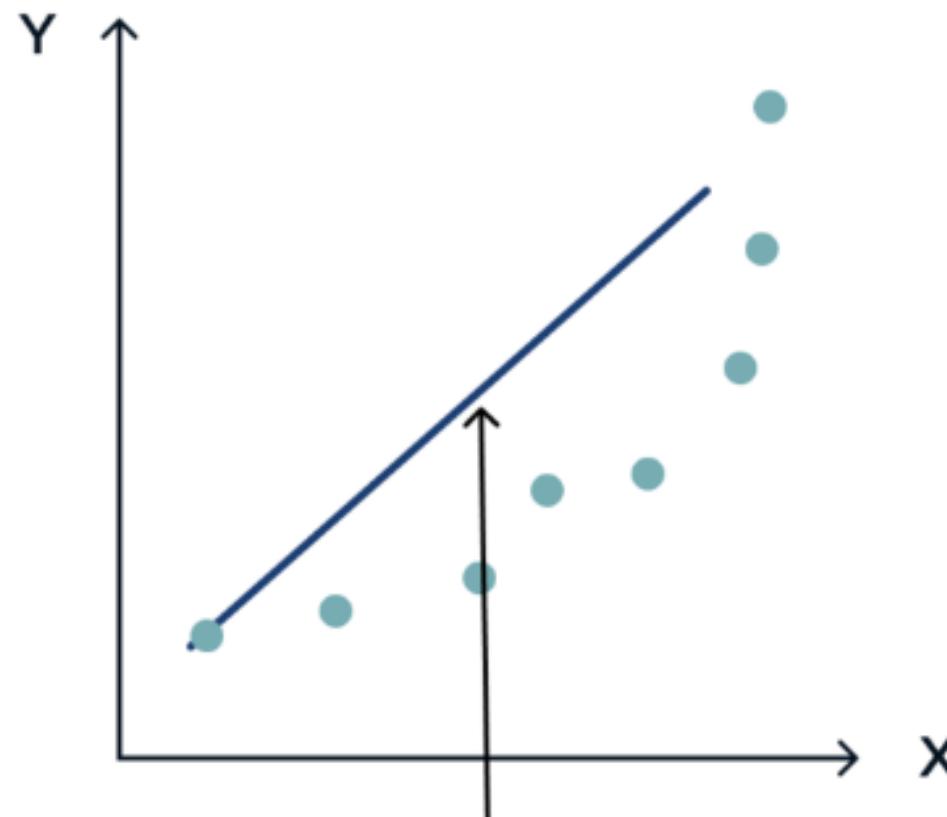
## MLOps Pipeline



# Theory Behind The Automatic step

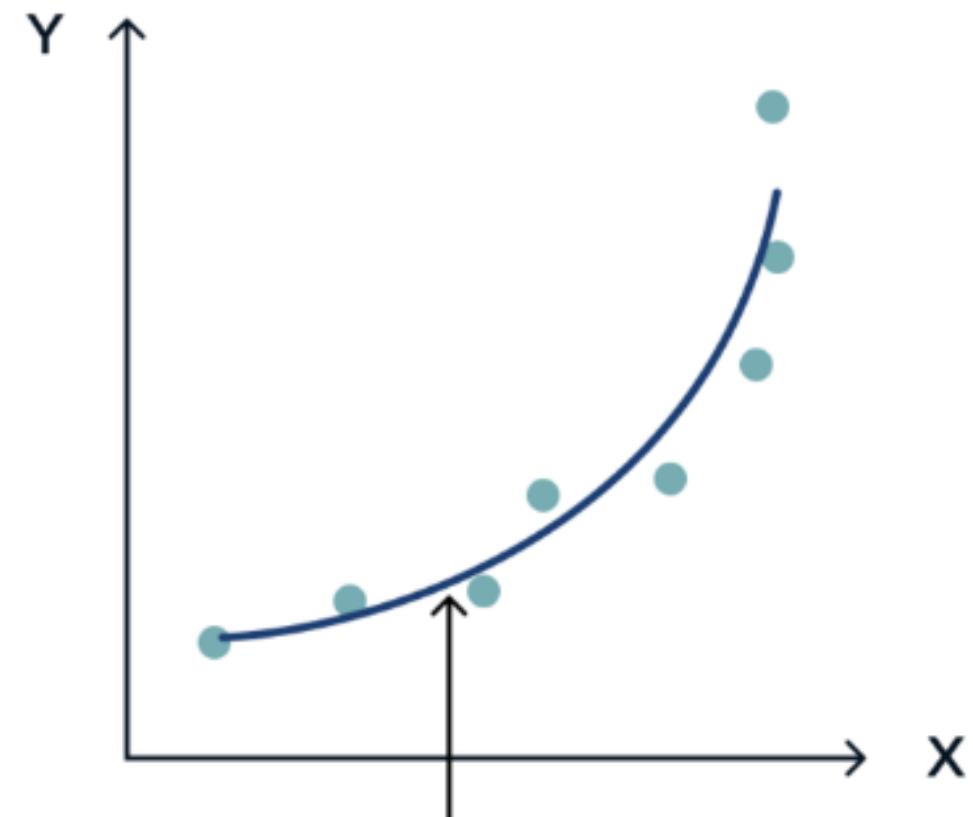


## Simple linear model



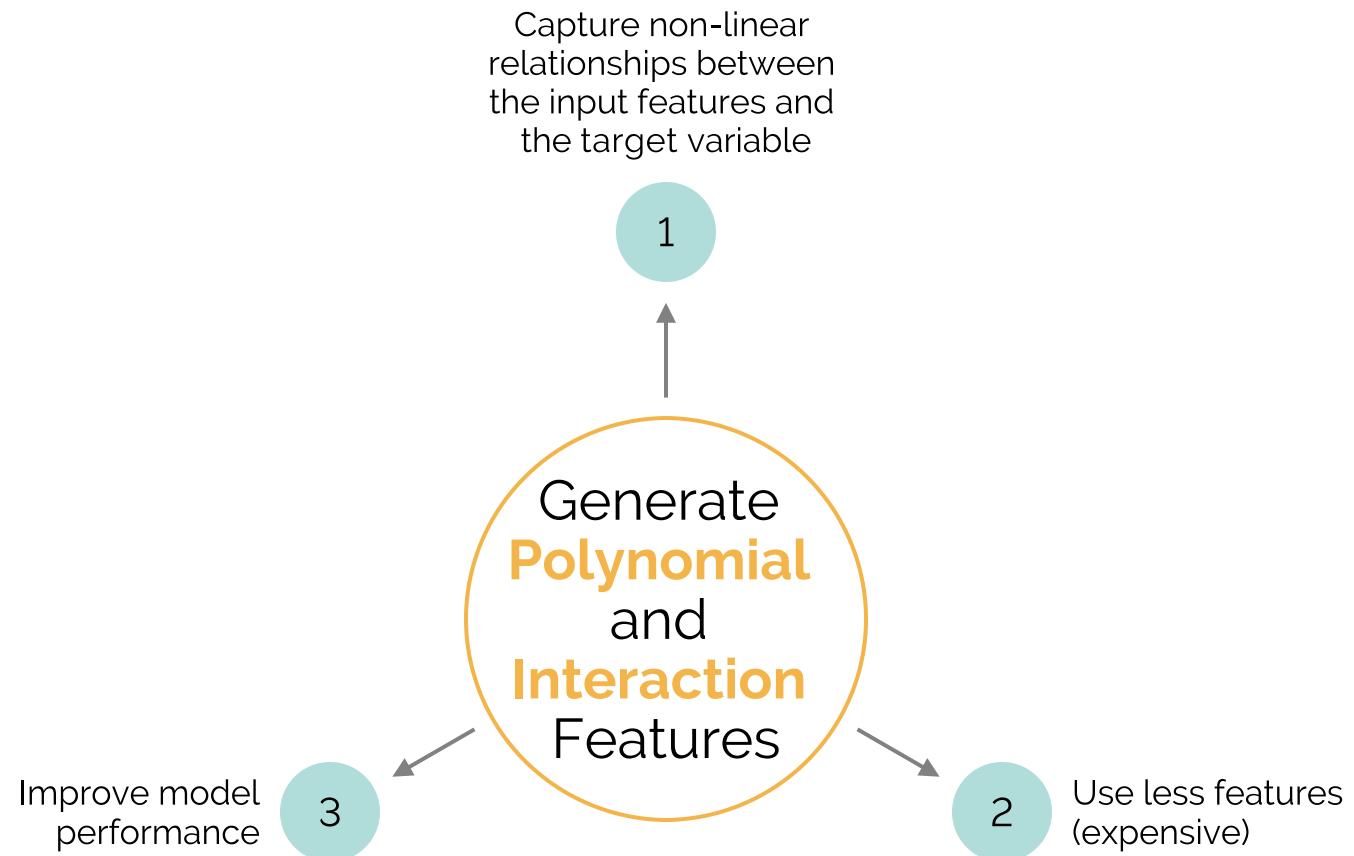
$$y = b_0 + b_1 x$$

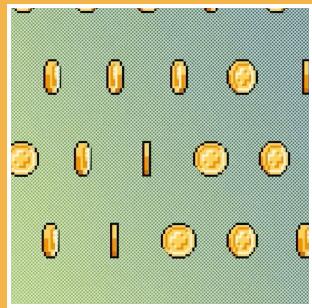
## Polynomial model



$$y = b_0 + b_1 x + b_2 x^2$$

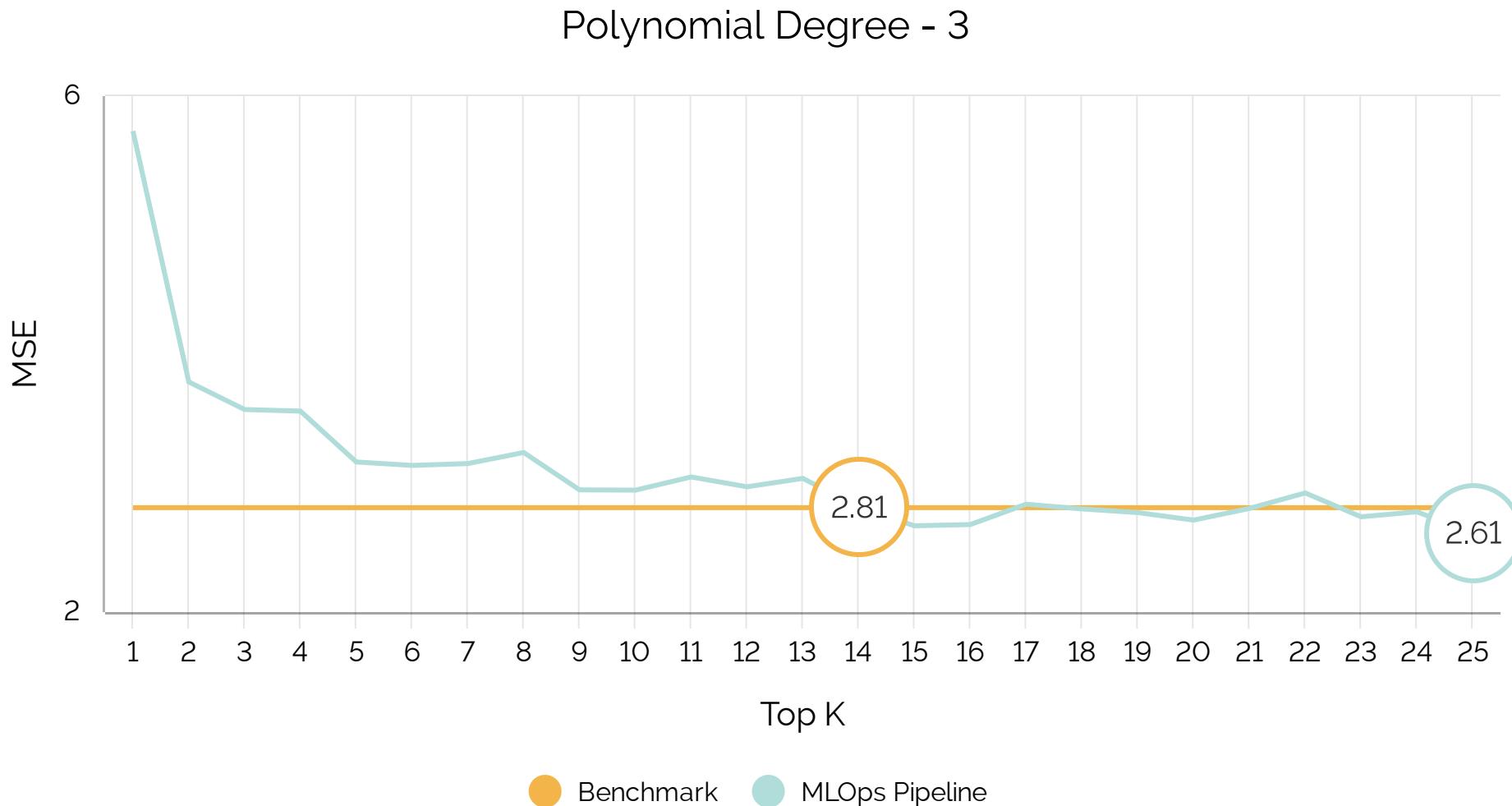
# Theory Behind The Automatic step





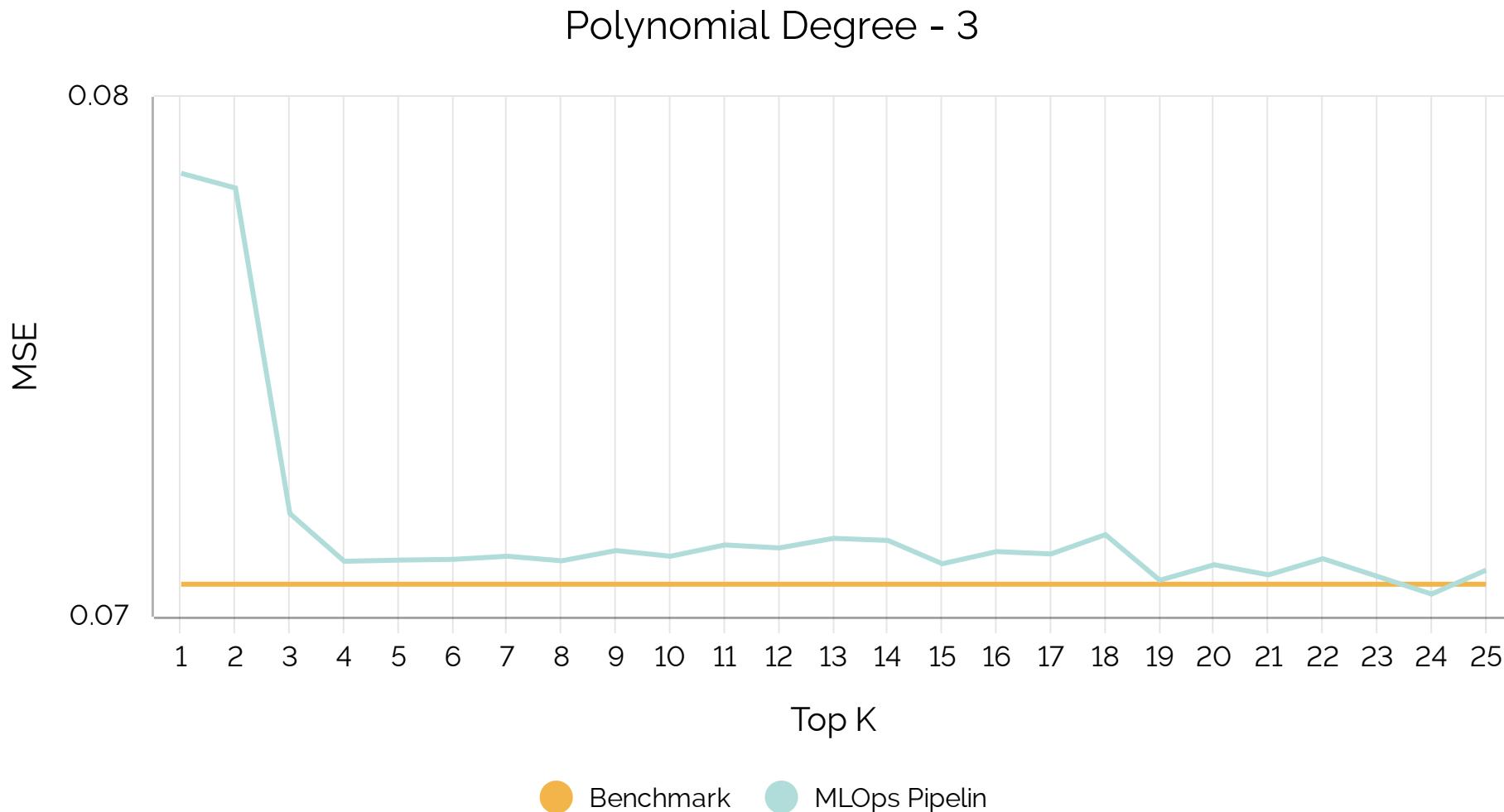
# Live Run Of Automatic Step

# Results - Boston Housing



7.6%  
Improvement  
in MSE  
USING THE  
MLOPS PIPELINE  
VS BENCHMARK

# Results - French Motor



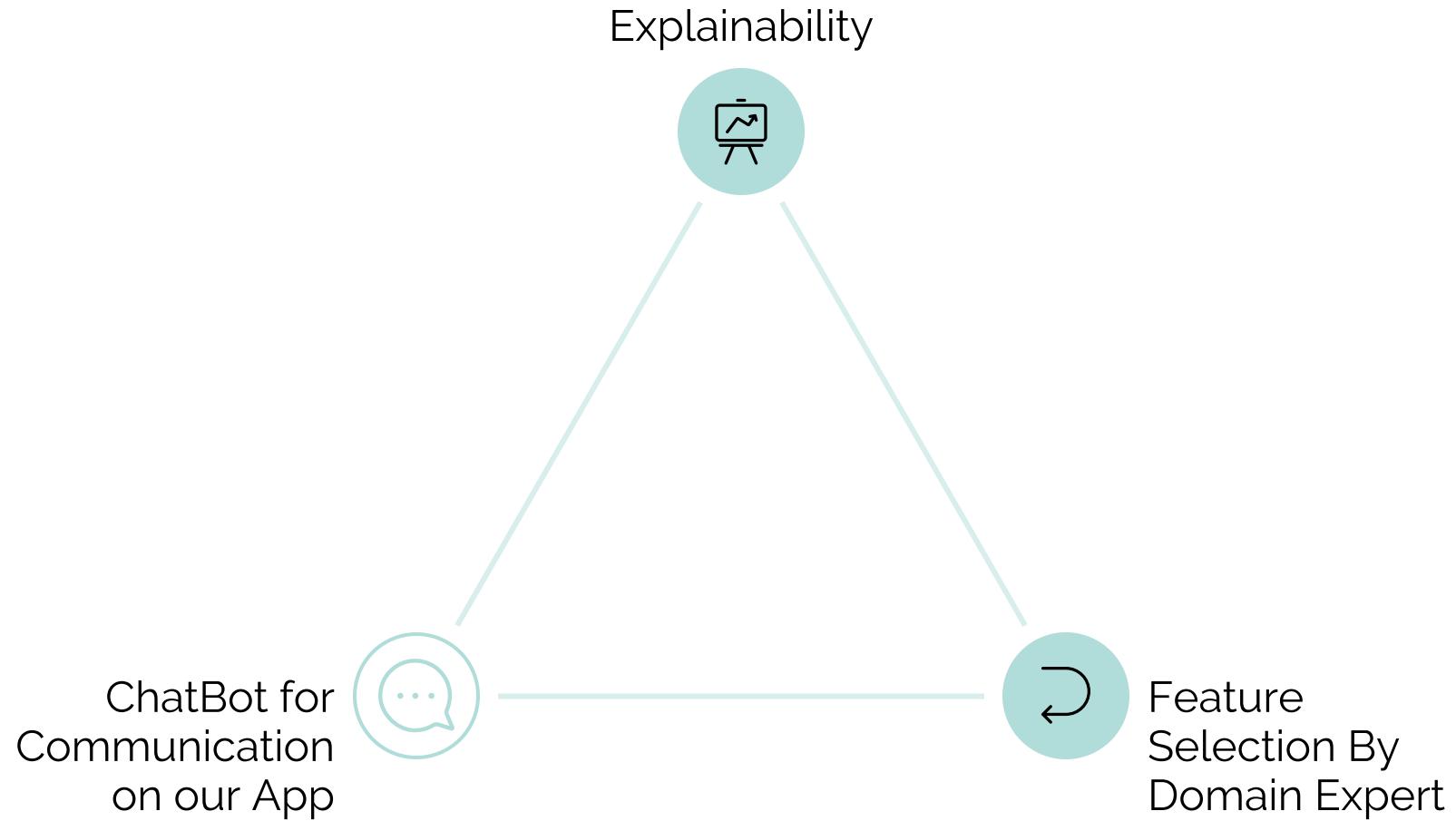
0.83%

Improvement  
in MSE

USING THE  
MLOPS PIPELINE  
VS BENCHMARK

# Suggested Future Steps

The steps necessary for improving the pipeline





# Questions?