



Global

PPC

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# CONTEXT AD CLICKS

## WHAT IS AVITO?

# SIMILAR TO CRAIGSLIST

Rechercher des annonces Aide New Chat Boutiques Se connecter Déposer une annonce

**Choisissez une ville**

- Casablanca
- Agadir
- Al Hoceïma
- Béni Mellal
- El Jadida
- Errachidia
- Fès
- Kénitra
- Khénifra
- Khouribga
- Larache
- Marrakech
- Meknès
- Nador
- Ouarzazate
- Oujda
- Rabat
- Safi
- Settat
- Salé
- Tanger
- Taza
- Tétouan
- > Autre ville...

**Choisissez une catégorie**

-  INFORMATIQUE ET MULTIMEDIA
-  VEHICULES
-  IMMOBILIER
-  POUR LA MAISON ET JARDIN
-  LOISIRS ET DIVERTISSEMENT
-  EMPLOI ET SERVICES

**Nous vous recommandons:**



Salon marocain shadow primatist maison دار محل تجاري عقد تسيير Moto yamax 400 CC

Prix: 1 600 000 DH Prix: 440 000 DH Prix: 250 000 DH Prix: 2 000 DH Prix: 45 000 DH

fixit food outdoor parent words writing resumes

## WHAT ARE CONTEXT ADS?

# SAMPLE ADS FROM AVITO

- ▶ Regular Ads
- ▶ Highlighted Ads
- ▶ Context Ads

**Context Ad**



**Стол обеденный с тонированным стеклом (ЛДСП)** Реклама

4 680 руб.

Обеденный стол подойдёт к любому интерьеру  
[bellucci-mebel.ru](http://bellucci-mebel.ru)

[О рекламодателе](#)

**Highlighted Ad**



★ **Бильярдный стол**

13 000 руб.

Компания  
Иркутск  
Сегодня 01:19

[Edit] [Delete] [Report]

**Regular Ads**



★ **Кухонный гарнитур арт. 3571**

65 030 руб.

"Дан мебель"- фабричные кухни  
Одинцово  
Сегодня 01:15

[Report]



★ **Кухонный гарнитур арт. 1982**

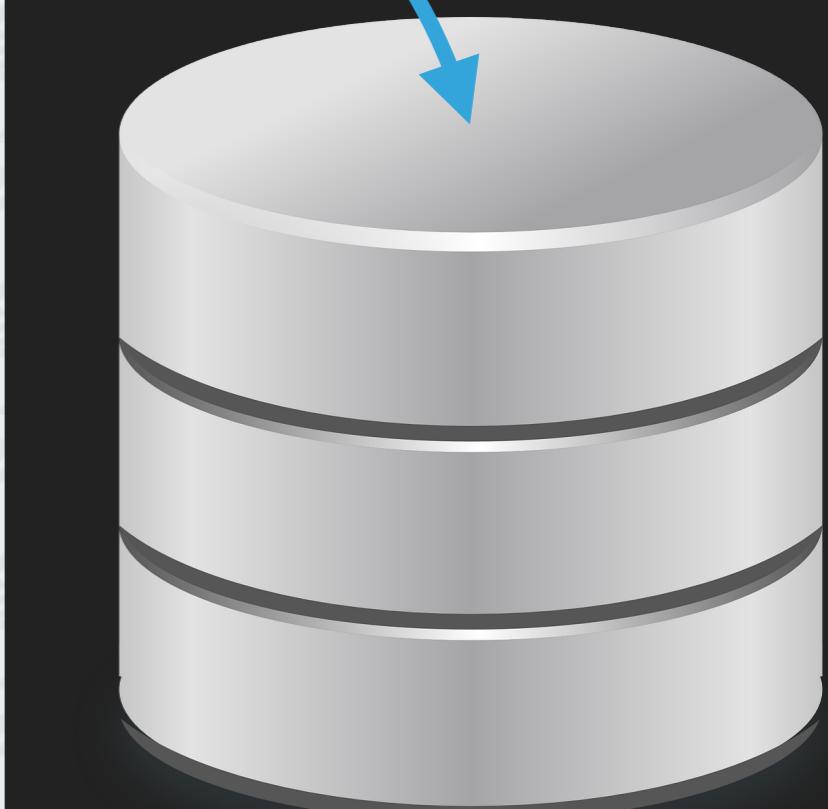
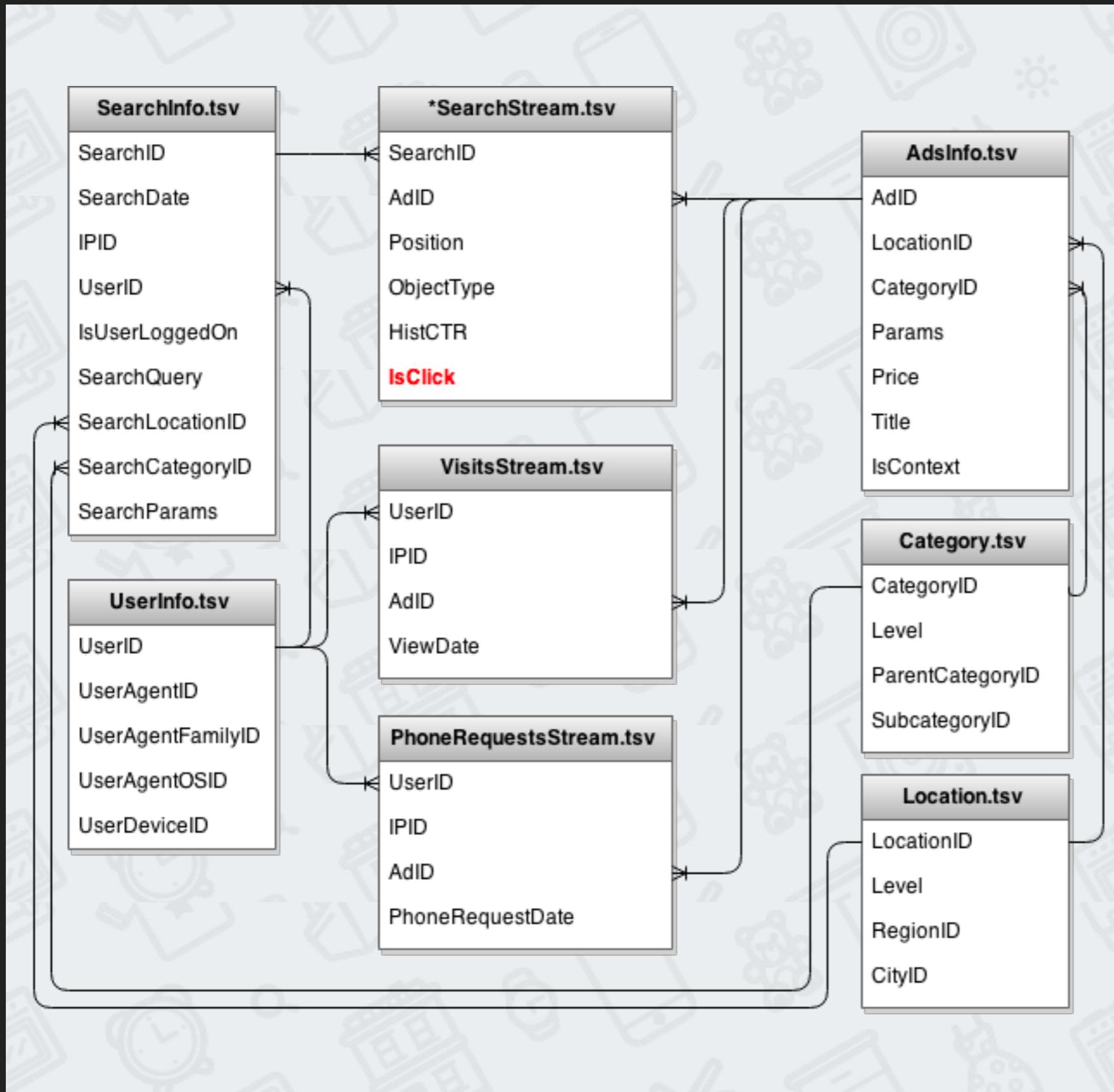
64 400 руб.

"Дан мебель"- фабричные кухни  
Долгопрудный  
Сегодня 01:14

[Report]

## EIGHT RELATIONAL TABLES

## ONE POSTGRES DATABASE

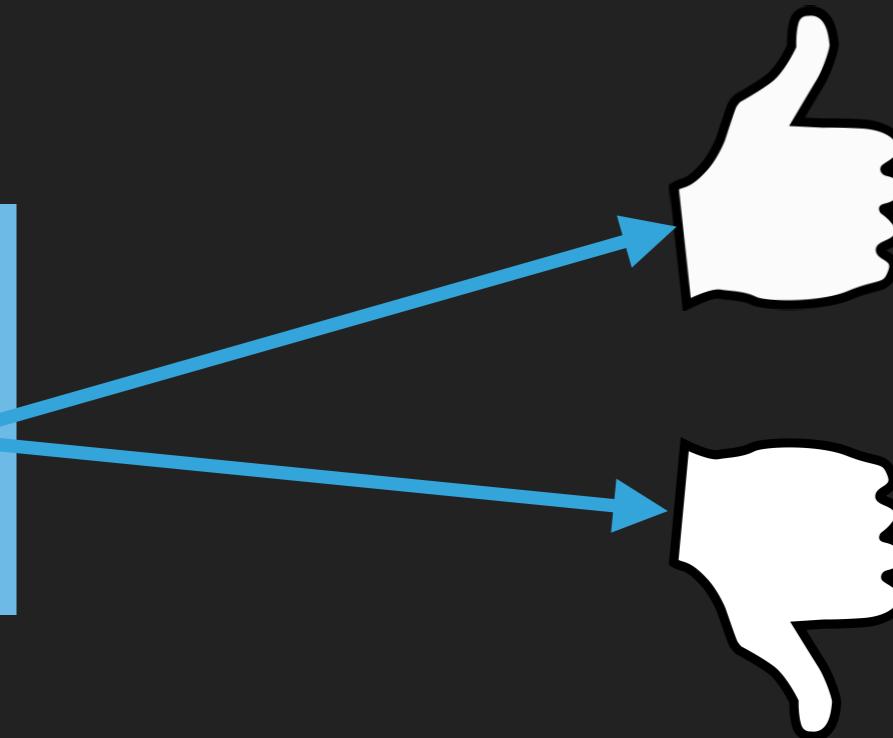


# FEATURE SELECTION & ENGINEERING - TOTAL OF 15 FEATURES

- ▶ **Search page level**
  - ▶ Number of contextual ads displayed
  - ▶ Category and Date of search
- ▶ **Ad level**
  - ▶ Position of the ad
  - ▶ Price of the item
- ▶ **User level**
  - ▶ Number of prior landing page views
  - ▶ Number or prior phone requests

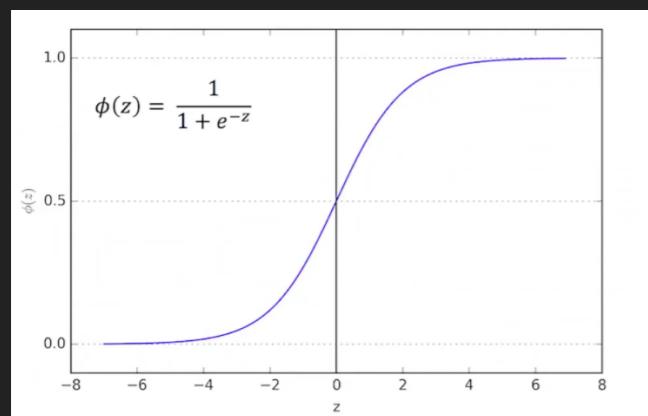


# 1.1 MIL+ SEARCHES

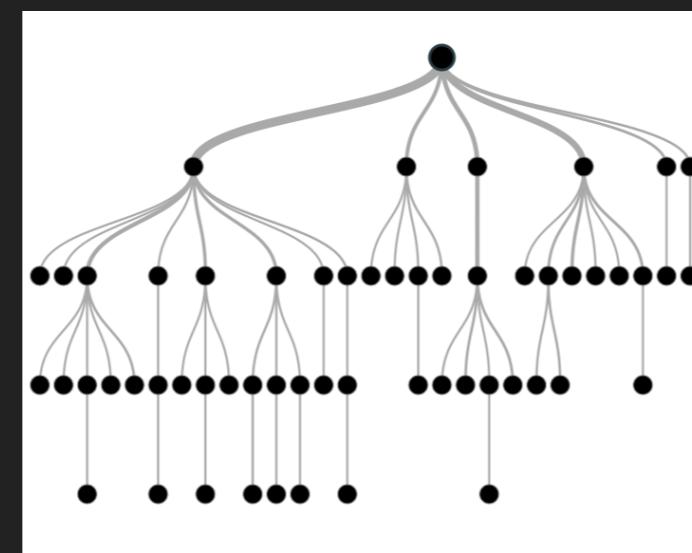


## BENCHMARK

- ▶ Logistic Reg



## TREE-BASED MODELS



- ▶ Random Forest
- ▶ XGBoost
- ▶ CATBoost

## RESULTS

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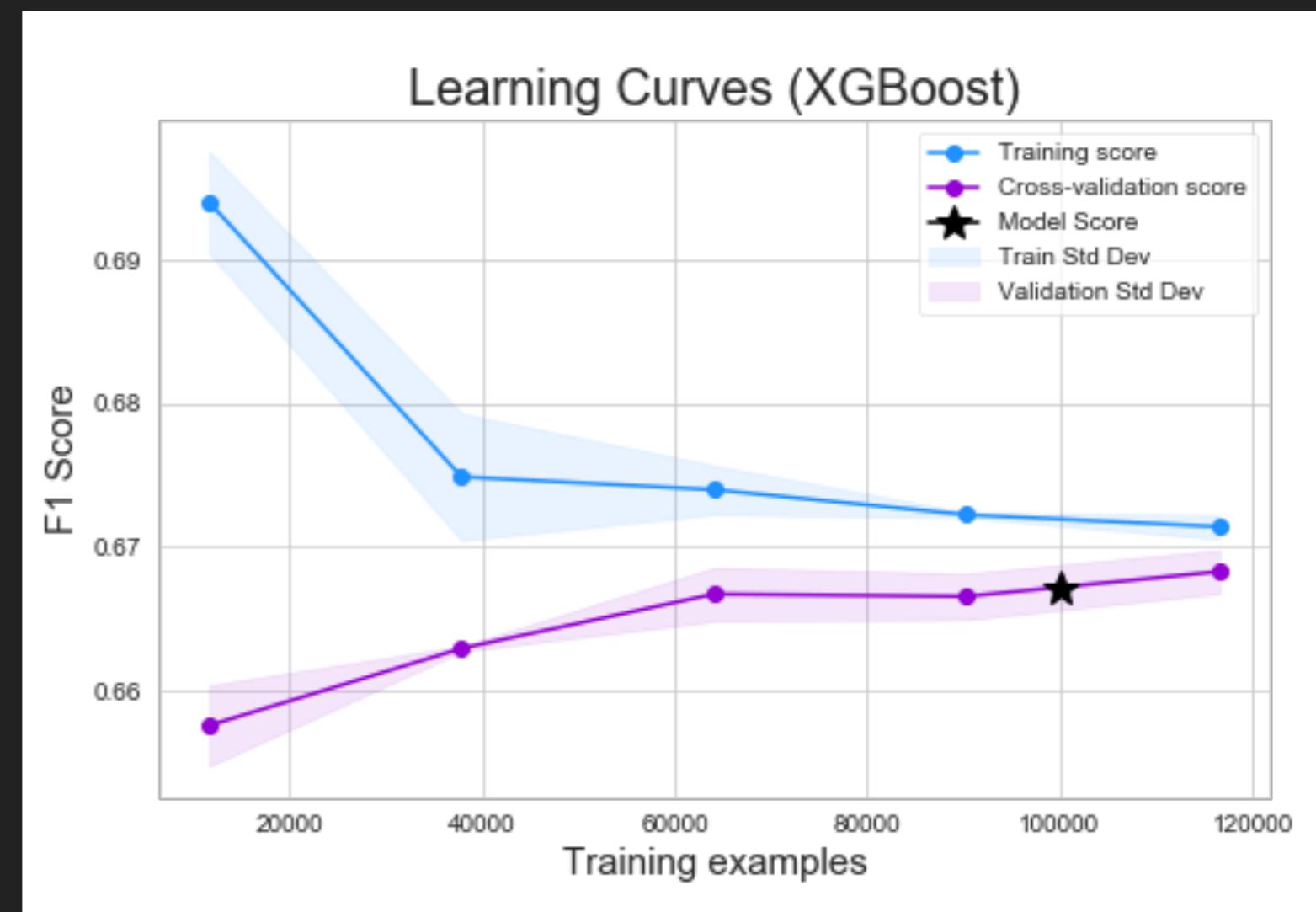
# MODEL PERFORMANCE

F1 score

0.67

AUC score

0.73



# USE AND FUTURE WORK

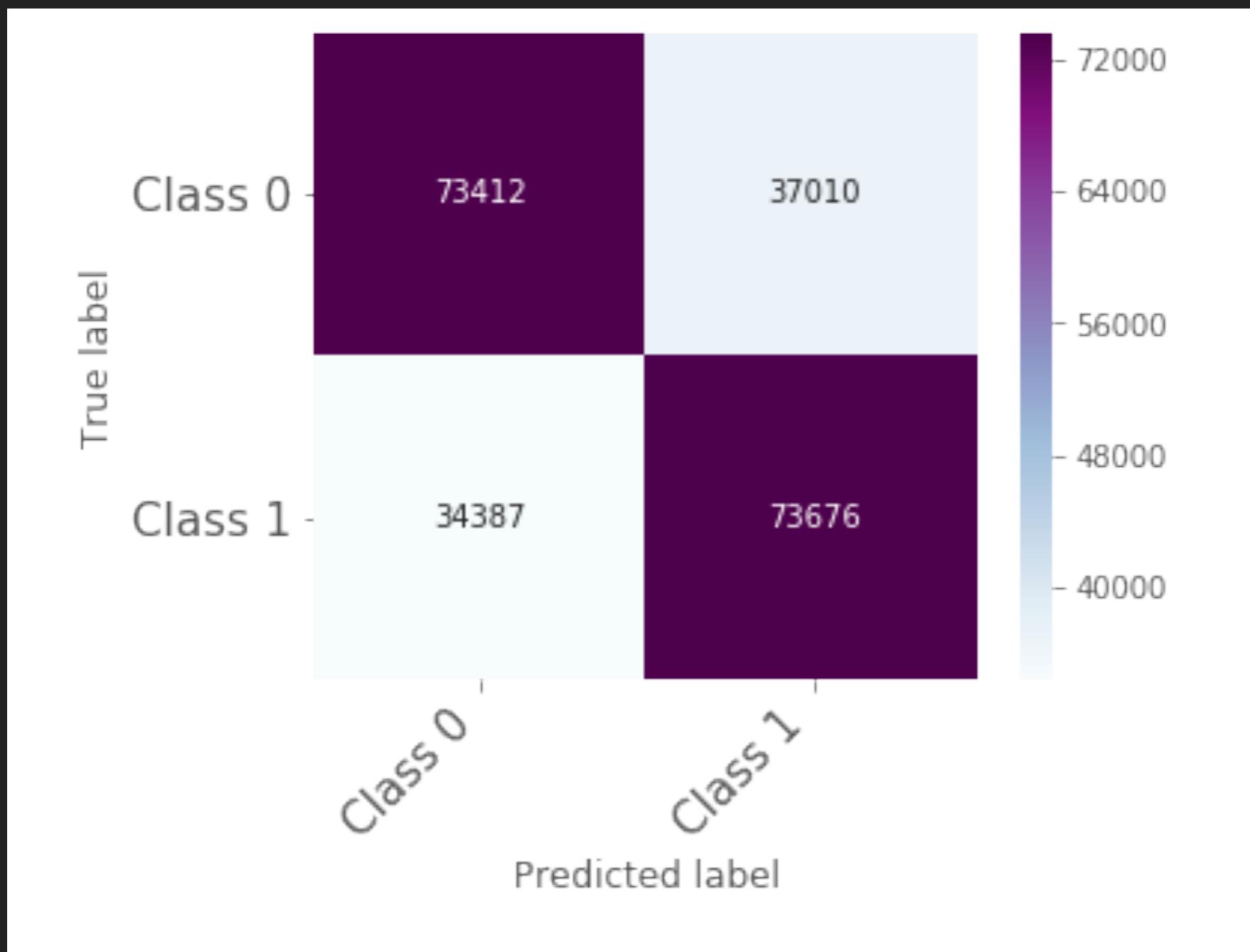
- ▶ **What more could be done?**
  - ▶ Additional feature engineering using NLP
- ▶ **How is this useful in business?**
  - ▶ Improves user experience (relevant ads)
  - ▶ Maximize the value of the advertiser
  - ▶ Digital marketers selling ad spots

THANK YOU FOR LISTENING!!!

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THANK YOU!!!!

# CONFUSION MATRIX FOR XGBOOST



# FEATURE IMPORTANCE OF RANDOM FOREST

