Data Intelligence Application 2018/19 Project



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1. Introduction

The product we decided to use for this project is the SAMSUNG GALAXY S10. This product is brand new, so we based our assumption on the previous model, the Samsung Galaxy S9 and more in general looking at the past trends in the smartphone market.

1.1 Product description

The Samsung Galaxy S10 was released on the 8th March 2019.

It’s an Android smartphone manufactured by Samsung Electronics and leaving out all the technical specifications, we consider it as a very popular product (Samsung is one of the most popular smartphone brands together with Apple Inc. and Huawei) with a trend like its past models and other competitors’ products.

We consider it as user friendly and less “iconic” than the Apple products.

We hypothesized 350€ as production cost.

2. Classes and environment description

2.1 Features Selection

We describe our possible customers by means of 3 main features with the following values:

* Age: Students, Workers, Retires
* Sex: Male, Female
* Region: Advanced economies, Less developed

[-- We indeed assumed that the behaviour of a male customer is different from a female one (better explanation in the Class description chapter) and similarly a customer from an economic advanced country will behave differently form a less developed one --]

Note: firstly, for the Region feature, we’ve also considered the “Poor countries”, but then we decided to remove them because they’re out of the market we’re considering.

2.2 Class descriptions

In the following tables we show how, using the previous explained features, we’ve created our main class of customers.

For readability, we split the 3D features tensor into 2 tables according to the feature sex. [-- The number are the probabilities of a user to belong to the specific feature --]

Each colour represents one class.

|  |  |  |  |
| --- | --- | --- | --- |
| **MALE 0.5** | Students 0.35 | Workers 0.45 | Retires 0.2 |
| Advanced Economies 0.6 | 0,105 | 0,135 | 0,06 |
| Less Developed 0.4 | 0,07 | 0,09 | 0,04 |

|  |  |  |  |
| --- | --- | --- | --- |
| **FEMALE 0.5** | Students 0.35 | Workers 0.45 | Retires 0.2 |
| Advanced Economies 0.6 | 0,105 | 0,135 | 0,06 |
| Less Developed 0.4 | 0,07 | 0,09 | 0,04 |

* Class 1: this class is characterized by the male students and workers of the economic advanced countries. [-- Female workers --] We assume that the members of this class have no problem in paying higher prices for buying our product.
* Class 2: in this class we can find the students and the workers of the less developed countries. We assume that the young girls of the developed countries behave similarly to the previous customers because, we assume, that they’re more interested in more “iconic” and famous phone like the Apple ones. Here, the members prefer to pay our product at lower price because, we assumed, that they have not much money to spend.
* Class 3: this class is composed by the male and female retires of all the ages. This class’ members are not very interested in buying expensive phones because, we assume, they prefer simpler and cheaper phones. There also a small group of particularly rich members that consider the goodness of a phone proportionally to its price, but there are very few.

2.3 Phases

3. Time horizon

3.1 Time horizon

3.2 Candidates selection

4. Aggregated demand curve

4.1 K-testing

4.2 UCB1/TS

4.2.1 UCB1

4.2.2 TS

4.3 SW-UCB1/SW-TS

4.3.1 SW-UCB1

4.3.2 SW-TS

5. Disaggregation

5.1 Description

5.2 UCB/TS

5.2.1 UCB1

5.2.2 TS

5.3 SW-UCB1/SW-TS

5.3.1 SW-UCB1

5.3.2 SW-TS

6. Conclusion