REQUIREMENTS

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INTEGRATION PROJECT

ICESI

Functional requirements

RF1: Display the database of devices in a table, with a layout of a SQL database table. The database will be loaded through a file that the user enters the program.

RF2: Generate different graphs on the devices database, each graph will be generated according to each of the criteria contained in the database. In addition, they will be of different

types, there will be bar charts, pie charts, dot charts, etc. To have a more comprehensive view for the user and to be able to easily differentiate which data he/she wants to review and analyze.

RF3: Filter the database, the user can filter all data according to the criteria he wants to view, according to his needs. In addition, there is also the possibility that, apart from choosing the desired criteria, you can choose a range for the data or an exact amount of data to view. This way the user has a more personalized filtering.

RF4: Clear filters, the program can delete all the filters selected in the table to be able to place different ones without accumulating or confusing the filters with each other.

RF5: Predict the value of a device, the user can manually enter a new device and according to different types of questions that the program has internally, it estimates its price and in turn, predicts the range of the phone, whether low, high, or medium.

RF6: Graphic the decision tree, the program allows to visualize the decision tree with which the database is being trained. To be able to easily verify and review the behavior of the tree and the nodes obtained.

RF7: Generate classification, based on the attribute values of the database. The classification can be performed in two ways, through the implemented decision tree or an external implemented library.

RF8: Test accuracy, to be able to check if the machine learning training is correct, the program must be able to calculate and analyze with a part of the database, the current accuracy capability. Both with the external library and the implemented decision tree.

Non-functional requirements

RNF1: Have Microsoft.ACE.OLEDB.12.0 provider installed.

RNF2: The uploaded file to read in the program, must be a .xlsx file type.

RNF3: A decision tree should be used to predict the price of a mobile device.

RNF4: An external C# library is used, the library is Microsoft's "ML.NET", a library for Machine Learning.