UVW Marketing Campaign

Progress Report | Group 12

Team Members

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Project Goal:

1. Given a set of variables surrounding an individual develop a decision support system capable of predicting whether they can afford the tuition fees.
2. Analyze the same set of variables and determine the most influential factor(s) that affect the affordability of tuition fees.

Project Plan:

To Determine the influential factor(s), correlation between the dimensions in the dataset with the Salary field should be analyzed. This can be done by Scatterplot matrix or correlation matrix.

Developing a ML model capable of predicting the salary range will use the features from the dataset that best describes the individual. This can be achieved by performing Chi-squared tests and selecting top ‘n’ features. These features will be used to train various models.

Some models in consideration are:

1. Logistic Regression
2. Decision Trees
3. Support Vector Machines
4. K-Nearest Neighbors

Work Distribution:

1. **Data preprocessing**
    a. In this step, we will analyze the integrity and consistency of the data given. We will also check for null values and determine the best possible replacement.

2. **Exploratory Data Analysis**
    a. We create the basic visualization that captures the essence of the data. This step will provide initial insights such as correlations among variables and distribution of the data. Further Analysis can be engineered using the insights generated.
3. **Feature selection**
    a. We determine the best possible features that contribute to the prediction of the target variable.
4. **Predictive Model Development**
    a. We use the features from step (3) to train multiple predictive models and select the best performing model based on performance metrics (precision, recall, F1 score and accuracy).
5. **Executive Report and System Documentation**
    a. We document our results, procedures and insights developed and create an executive report that will serve as a marketing profile for individuals in the given dataset.

Timeline Table:

Task	Teammates	Deadline
Data preprocessing	Rithvik and Raakesh	03/18/2021
Exploratory Data Analysis	Everyone	04/01/2021
Feature selection	Ajay and Aparokshith	04/08/2021
Predictive Model Development	Sanjay and Vivek	04/17/2021
Executive Report and System Documentation.	Everyone	04/24/2021