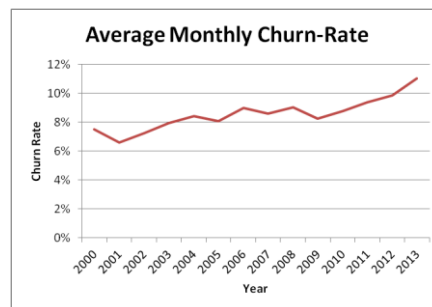<div align="center">

Assignment: Telco Churn

MIS41270 Data Management and Mining

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Introduction

The telecommunication company that you work for, Telco ABC, is having issues with customer retention. Customer churn has been increasing steadily over time.

The head of customer retention has asked you for assistance in deriving a communication strategy to reverse this current trend. Using analytic techniques, you must create a report for senior management outlining a data-driven communications strategy to help the retention team reduce churn.

Data

A number of datasets containing customer details will be provided to students. All analysis must be performed using software of your choice.

Analysis

You have been asked to provide a report for senior management with the following main sections:

1. You must first assess the situation and consider all of the various analytics approaches that could be useful for the business problem described above.

2. Provide a data quality report based on descriptive statistics for each of the variables in the dataset (use both statistical and graphical output). Comment on anything unusual or noteworthy that you see in the data.

3. Use the training dataset to create a customer profile (segmentation) by selecting relevant data. Justify your choice of inputs & final cluster solution. Describe the final solution using variables not used in the cluster definition.

4. Use the training dataset and an appropriate prediction technique to identify which customers are likely to churn. Describe the final solution. You must also make reference to appropriate model validation output regarding the accuracy of your prediction.

5. Use the scoring (unseen) dataset and apply the models created in steps 3 and 4 to the current customer base and provide a commentary of the output. Describe the scored dataset using appropriate descriptive statistics. Detail how the scored dataset may be used for decision making for customer retention outlining advantages, disadvantages and caveats, as appropriate. Please use supporting cases studies and other appropriate references to support and justify these marketing actions.

6. Create a report for senior management outlining how your findings could be used to solve the business problem. The report must reference 1-5, above.

Submission Details

Submissions will consist of a single document that should be submitted via Bright Space by close of business on **Friday 24th April.** The document should contain approximately 3000 words. Extra content can be included in appendices.

Marking Scheme

The marking scheme for this assignment is as follows:

10%   Assessment of all possible analytics approaches

10%   Data quality report

20%   Customer segmentation and profiling

20%   Predicting a customer's propensity to churn

20%   Model Deployment

10%   Report for senior management

10%   Wow factor

The documentation for your submission must contain the name and student number for each team member along with the assignment title and the name of your lecturer.

Students should complete the project in teams of 3-4 students. You must have submitted the make of your team to training@theanalyticsstore.com by 24th February.

As this is a team project a work-log should be submitted with your submission.