**Capstone Three Project - Project Proposal Brintha S**

**October 2021**

**Problem statement:**

How to predict and identify which customers are going to churn or end their subscription/contract with a telecom organization for the upcoming month?

**Context:**

Customer churn is the tendency of customers to leave the service provider or switch to a different provider due to several reasons. Compared to other fields, organizations in the telecommunication industry experience higher churn rates of around 20 – 40% every year (Ahn et al., 2020). Investigating on customer churn rate is important as it affects the KPIs and profitability of the company adversely. In general, acquiring new customers costs much more than retaining existing customers because of expenses relating to marketing promotions. Also, it is believed that existing customers bring new customers through positive word of mouth (Devriendt, et al., 2021). Therefore, this project will focus on predicting the churn rates of customers in a telecom organization. Subsequently, this will help businesses to segment customers who will most likely churn, and thereby to formulate targeted strategies to retain them for a long period.

**Criteria for success**

In order to predict if a customer will churn or not, this project uses features such as type of services offered (phone/internet/movie streaming), support services such as tech support, tenure period with the company, type of contract(monthly/yearly), monthly charges, total charges etc.

**Scope of Solution Space:**

The dataset for the project is from a fictional Telecom company that offers home phone and internet services to customers in California in Q3. Hence, the churn model that will be developed in this project might be limited by these demographics and time related to that.

**Constraints**

In addition to the features in this dataset, customer’s likelihood of churning will be affected by other competitive factors such as the number of companies in the area that offer the same services, their pricing strategies etc. This dataset doesn’t have access to those features. Another interesting aspect would be a customer’s personal experience/satisfaction with the company, particularly details regarding their customer service experience, service recovery experience etc. However, this dataset doesn’t show any features as such.

**Data source:**

Data consists of information of around 7043 customers’ service contracts – type of services offered, payment details etc. Data was extracted from IBM Cognos Analytics Data Collection.

Source of the data is available from the following link.

<https://community.ibm.com/accelerators/catalog/content/Customer-churn>

**Deliverables:**

* A churn prediction model
* Project report containing different types of models that will be used to predict the churn rates

**References**

Devriendt, F., Berrevoets, J., & Verbeke, W. “Why you should stop predicting customer churn and start using uplift models”. 2021, *Information Sciences*, 548, 497-515.

Ahn, J., Hwang, J., Kim, D., Choi, H. & Kang, S. (2020), S."A Survey on Churn Analysis in Various Business Domains," 2020, IEEE Access, 8, 220816-220839.