# DAB103- Project #2 – Final project

Credit card customers, predict churning customers by Sakshi Goyal

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1. **Attrition by income:**

* This graph illustrates the connection between levels of income and attrition ratio.
* According to the data, individuals with incomes lower than $40k and higher than $120k+ have the highest rates of attrition, which are 17.19% and 17.33% accordingly.
* There could be some reasons as following:

+ On the one hand, the low-income individuals might find that cost of borrowing from credit card’s limit is significantly high. It is difficult for them to maintain and continue borrowing from this facility.

+ On the other hand, high-income earners might think that they do not have to reply on credit card loan for their living expenses.

1. **Attrition by card category:**

* A bank classifies its credit card product into 4 different categories to differentiate the level of customers. From the most basic to the VIP are Blue, Silver, Gold and Platinum.
* Platinum credit card customers have the highest ratio of attrition. These are the main reasons:

+ Features included the credit card are not attractive enough for ultra-rich people, who enjoy multiple privileges.

+ Credit limit on their credit card is not high enough.

+ They have so much cash to afford the luxurious lifestyles.

1. **Attribution by education level:**

* Education level is also a key factor impacting the attrition ratio.
* It stands out that people with doctorate are those less likely maintain the credit cards.
* A study shows that they tend to be risk averse, therefore they might feel that missing a credit card due date could affect their social status or credit standing.
* From another view which is consistent with previous analysis, doctor degree holders are among top earners in the society. Therefore, their incomes would be sufficient to cover their living expenses.

1. **Attrition by total relationship count:**

* This graph represents the correlation between the attrition level with number of banking products a customer is using, as well as how often the bank contacts them.
* The column shows the numbers of banking product that a customer is using.
* The greener color illustrates the lower engagement from the bank, while orange means higher interaction level with customers.
* Data clearly shows that the larger numbers of products offered to customers, the lower the attrition is.
* Secondly, if bank contact customers more often, they tend to stay with bank longer.