# **Combination Drivers**

## **High-Risk Churn Clusters:**

## **Over-Utilizers:**

### High Credit Utilization, Late Payments:

* High **Credit\_Utilization\_Rate**
* **Payment**\_**Timeliness** *set to 'Late'*
* **Interpretation**: The customer is relying heavily on the credit card but struggling to make timely payments.
* **Recommended Action:** Offer financial counselling or workshops on managing credit effectively. Consider offering a temporary reduction in interest rate or a grace period to help them get back on track.

### Recurrent Late Fee Charges with Outstanding Debt:

* **Payment\_Timeliness** often set to 'Late'
* High **Outstanding\_Debt**
* **Interpretation:** Financial strain on the customer which might lead them to look for better financial options.
* **Recommended Action:** Reach out to these customers with options for debt consolidation or payment plans. Temporarily waive or reduce late fees for customers who enroll in automatic payments.

### High Installment Usage with High Outstanding Debt:

* Frequent use of **Installment\_Plan**
* High **Outstanding\_Debt**
* **Interpretation**: The customer might be stretching their financial capacity.
* **Recommended Action:** Reach out to these customers with options for debt consolidation or payment plans. Temporarily waive or reduce late fees for customers who enroll in automatic payments.

## **Inactive Users:**

### Inactive Online, Poor Email Engagement:

* High **Days\_Since\_Last\_Login**
* Low **Open\_Email\_Rate**
* **Interpretation**: The customer isn't engaging with the online platform or the email campaigns, which could be an early sign of disengagement.
* **Recommended Action:** Launch re-engagement email campaigns with personalized offers. Improve online user experience and conduct surveys to understand user pain points.

### New Users with Minimal Interactions:

* Recently acquired customers
* Low **Interaction\_ID** count
* **Interpretation**: Newly acquired customers are not engaging much, showing early signs of potential churn.
* **Recommended Action:** Implement a robust onboarding process with tutorials and welcome offers. Assign dedicated customer success agents for new users to address concerns.

### Inactive yet High Fees:

* High **Days\_Since\_Last\_Transaction**
* High **Annual\_Fee**
* **Interpretation**: Customers are being charged high fees but aren't using the card. They might churn due to not seeing the value for the fees they're paying.
* **Recommended Action:** Re-evaluate the fee structure for inactive users. Offer a temporary fee waiver or introduce a lower fee card variant. Consider loyalty or reward programs to incentivize spending.

## **Complaint-heavy Users:**

### High Complaints, Poor Resolution Status:

* High **Num\_Complaints**
* **Resolution\_Status** set to 'Pending' or 'Escalated'
* **Interpretation**: The customer has many grievances, and they aren't being resolved promptly or effectively.
* **Recommended Action:** Prioritize resolution for these users, assign dedicated customer service representatives, and provide compensatory offers for the inconvenience.

### Low Digital Engagement but High Complaints:

* Low **Open\_Email\_Rate** and high **Days\_Since\_Last\_Login**
* High **Num\_Complaints**
* **Interpretation**: Customers may be experiencing issues with digital channels leading to dissatisfaction.
* **Recommended Action**: Enhance digital user experience and conduct a survey to pinpoint issues. Offer tutorials or webinars to educate users on digital functionalities.

## **Moderate-Risk Churn Clusters:**

## **Sporadic Users:**

### Usage only on Weekends or Holidays:

* High **Weekend\_vs\_Weekday\_Spending** or **Holiday\_Spending**
* **Interpretation**: The card might be a secondary option used only during leisure times.
* **Recommended Action:** Target these users with exclusive weekday offers or provide incentives for more frequent usage.

### Promo Engagement without Transactions:

* High engagement with promotions (**Promo\_Code** usage)
* Low **Transaction\_Amount** or **Transaction\_Frequency**
* **Interpretation**: The customer is interested in offers but isn't making transactions, indicating a possible misalignment in promotional strategies.
* **Recommended Action:** Reassess promotional strategies and align them with customer preferences. Conduct surveys to understand gaps.

## **High Balancers:**

### High Balance, Minimum Payments:

* High **Current\_Balance**
* **Payment\_Timeliness** set to 'Late' or 'Very Late’
* **Low Min\_Payment** relative to **Current\_Balance**
* **Interpretation**: The customer may be struggling financially, leading to potential default or churn.
* **Recommended Action**: Offer personalized payment plans and financial counseling. Reassess reward points allocation to incentivize payments.

### High Balance with Low Reward Points:

* High **Current\_Balance**
* Low **Reward\_Points\_Earned**
* **Interpretation**: The card might not offer competitive rewards for the spending.
* **Recommended Action**: Offer personalized payment plans and financial counseling. Reassess reward points allocation to incentivize payments.

## **New Users with Low Engagement:**

### Low Sentiment, High Interaction without Resolution:

* Negative **Sentiment\_Score**
* High number of interactions (**Interaction\_ID** count) with unresolved status (**Resolution\_Status** set to 'Pending' or 'Escalated')
* **Interpretation**: The customer is having frequent issues and is expressing negative sentiment, a strong churn indicator.
* **Recommended Action:** Assign dedicated support teams for new users. Offer personalized promotions or incentives to encourage engagement.

## **Low-Risk Churn Clusters:**

## **Loyal Users:**

### High Transaction, Low Reward Redemption:

* High **Transaction\_Amount**
* Low **Reward\_Points\_Redeemed**
* **Interpretation**: The customer is spending a lot but not engaging with the rewards program, which could be a sign of low loyalty or awareness of the program.
* **Recommended Action:** Launch awareness campaigns on reward redemptions. Consider revamping the rewards program if it's not appealing enough.

### Infrequent Usage, High Credit Limit:

* Low **Transaction\_Frequency**
* High **Max\_Credit\_Limit**
* **Interpretation**: The customer has been trusted with a high credit limit but is not using the card frequently, indicating potential dissatisfaction or preference for another card.
* **Recommended Action:** Engage these users with personalized offers and understand their needs better through surveys or direct communication.

## **Financially Conscious Users:**

### Frequent Changes in Communication Preferences:

* Regular updates to **Communication\_Preference**
* **Interpretation**: Suggests that they have a low tolerance for misaligned or non-personalized communication. If they feel that their communication preferences are not being respected or met, they might be more inclined to leave or disengage from the service.
* **Recommended Action:** Ensure strict adherence to communication preferences. Periodically review and update communication strategies.

## **Reward Maximisers:**

### High Spending during Sales but No Discount Engagement:

* High **Transaction\_Amount** during known sale periods (like Black Friday, Holiday Season)
* No usage of **Promo\_Code** or low **Discount\_Applied**
* **Interpretation**: The customer is spending during sales but not making the most of the card's discount offers.
* **Recommended Action:** Promote discount offers more aggressively during sale seasons. Consider partnerships with popular retailers to provide exclusive discounts.

# **Primary, Secondary, and Tertiary**

# **High-Risk Churn Clusters:**

## **Over-Utilizers:**

* **Credit\_Utilization\_Rate:** High utilization combined with other negative indicators can signify
* **Outstanding\_Debt**: Combined with other indicators, can signify financial distress potential churn.
* **Payment\_Timeliness**: Consistent late payments can indicate financial distress or dissatisfaction.
* **Current\_Balance:** High balances without appropriate rewards or with minimum payments can indicate potential churn.

## **Inactive Users:**

* **Days\_Since\_Last\_Login:** Extended inactivity can be a direct sign of disengagement.
* **Days\_Since\_Last\_Transaction**: A direct measure of engagement and satisfaction.
* **Max\_Credit\_Limit**: High limit but low usage suggests a preference for another card.
* **Transaction\_Frequency**: Irregular patterns might show declining engagement.

## **Complaint-heavy Users:**

* + **Num\_Complaints:** High complaint counts often directly relate to dissatisfaction.
  + **Resolution\_Status**: Unresolved issues can immediately drive customers away.
  + **Sentiment\_Score**: Negative sentiment scores directly reflect dissatisfaction.

# **Moderate-Risk Churn Clusters:**

## **Sporadic Users:**

* + **Authorization\_Status:** Recurring transaction authorization failures can frustrate customers.
  + **Promo\_Code:** High engagement without transactions can indicate promotional strategy misalignment.
  + **Currency\_Type:** Overseas spending without associated benefits can indicate lack of perceived value.
  + **Channel\_Preference**: Shifts in preference might indicate changing user behavior or dissatisfaction with a particular channel.

## **High Balancers:**

* + **Annual\_Fee:** High fees combined with low engagement can drive churn.
  + **Transaction\_Amount**: High transactions but low rewards can indicate misalignment in value proposition.
  + **Reward\_Points\_Redeemed:** Low redemption despite high earning can suggest lack of perceived value.

## **New Users with Low Engagement:**

* + **Customer\_Lifetime\_Value**: A declining CLV can be an early sign of potential churn.
  + **Payment\_Method**: Shifts might suggest the customer is looking for convenience elsewhere.

# **Low-Risk Churn Clusters:**

## **Loyal Users:**

* + **Days\_Since\_Last\_Customer\_Service\_Interaction:** Frequent interactions can either indicate high engagement or repeated issues.
  + **Interaction\_Type** and **Interaction\_Duration**: The nature and length of interactions can provide context about customer satisfaction.

## **Financially Conscious Users:**

* + **Open\_Email\_Rate**: Low engagement with communications can suggest decreasing interest. (No direct matches from the list.)

## **Reward Maximizers:**

* + **Reward\_Points\_Earned**: It might be concerning if there's a sharp decline or earned points are disproportionate to spending.

## **Other (Not Directly Matching Any of the Defined Clusters):**

* + **Communication\_Preference: Frequent changes might indicate dissatisfaction with communication frequency or relevance.**
  + **Network\_Size and Network\_Engagement\_Rate: A large yet inactive network might be concerning.**