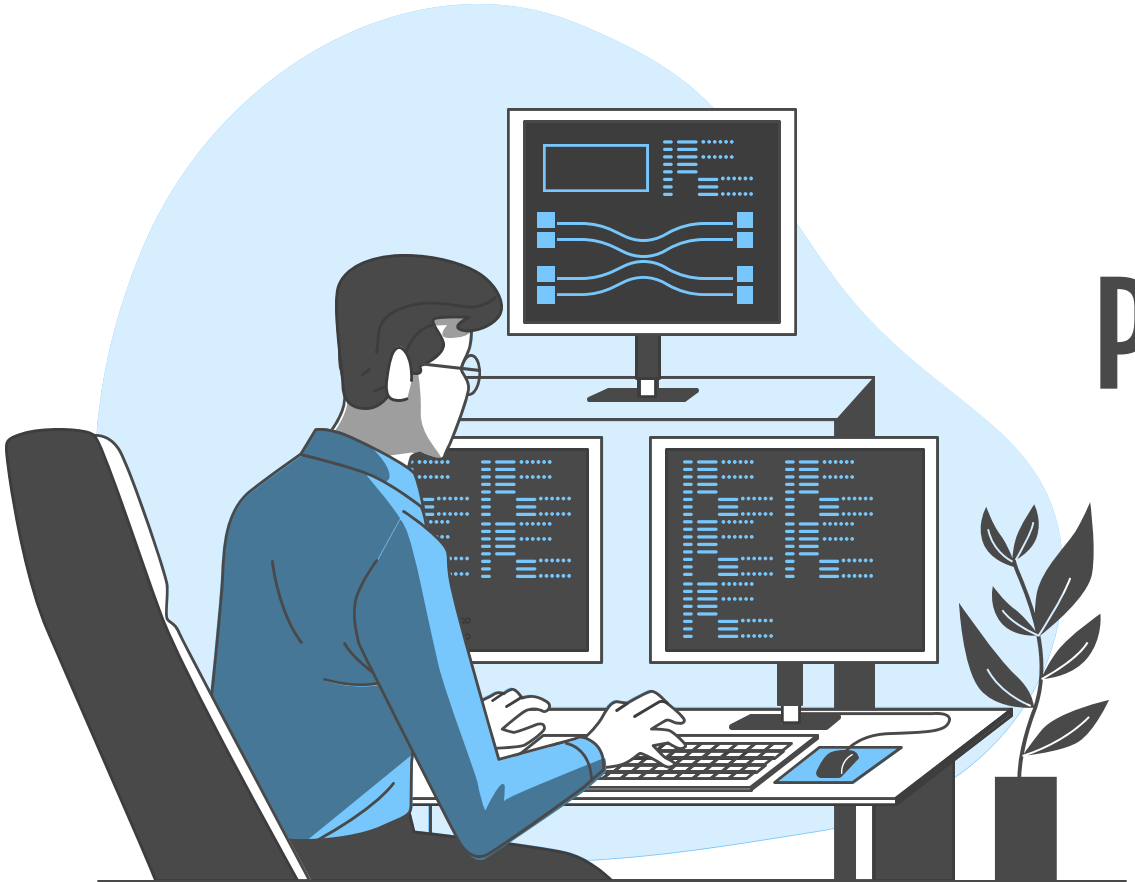

# Perpay Data Challenge

John Yang

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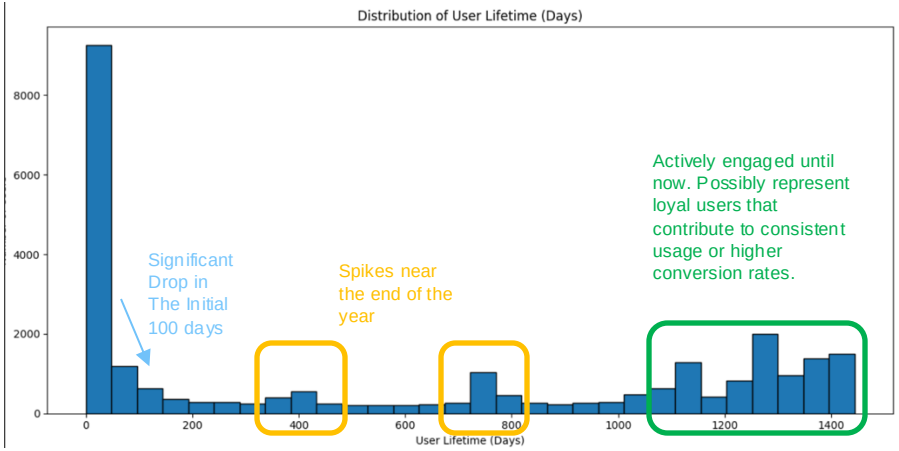
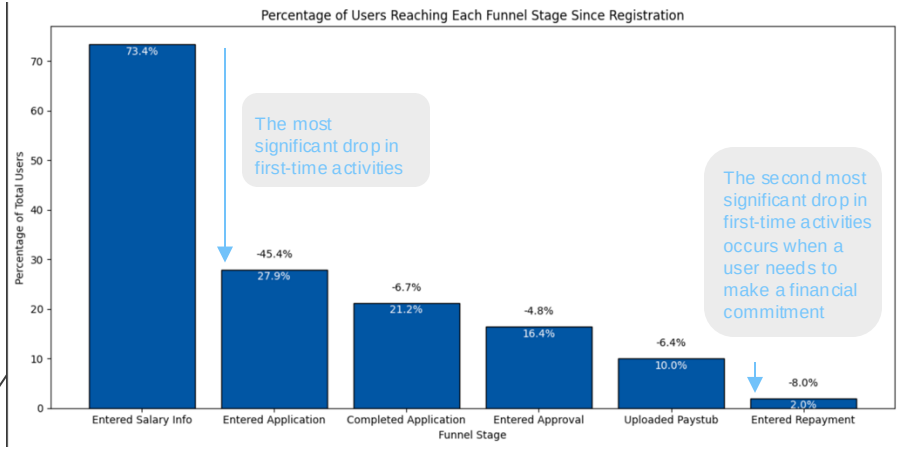
# Executive Summary

- **User Lifetime Conversion**: 45.4% of users enter salary info but never start an application. This shows a major engagement gap at the start, which means Perpay should introduce targeted incentives to encourage application initiation.
- **Referral Campaigns:** Referral programs may drive significant spikes in user sign-ups, particularly during seasonal promotions, and have a sustained impact beyond the initial surge, making them a valuable strategy for future user acquisition.
- **Proposed Metrics**: Conversion to Complete Application, Conversion to Payment Setup, Conversion to Repayment, Cancelation Reasons, Time Elapsed Between Approval and Repayment.
- **Conversion to Repayment:** The conversion rate dropped 43% at the repayment stage. To push more users to make financial commitments, Perpay needs to streamline the payment setup process and have clearer communication.
- **Time Elapsed Between Approval and Repayment**: 34.5% of orders enter repayment more than 15 days after approval. Perpay should Investigate why some users take longer to enter repayment and implement targeted incentives to speed up the process.
- **Data Quality Check**: Some Inconsistencies were found for timestamps, cancellation reasons, and spending limit, suggesting potential data entry errors. But given the small volume, it's not a great disruption to this analysis.

# Early Drop-offs and Payment Hurdles Highlight Key Engagement Gaps, While Loyal Segments Show Long-term Potential

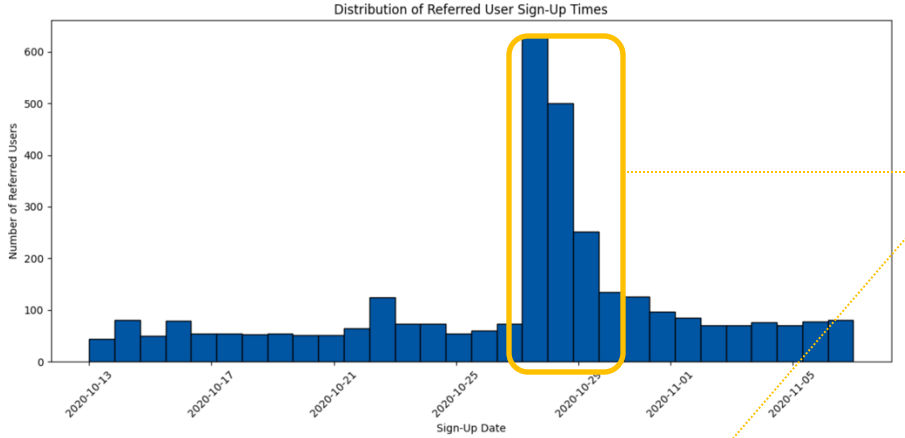


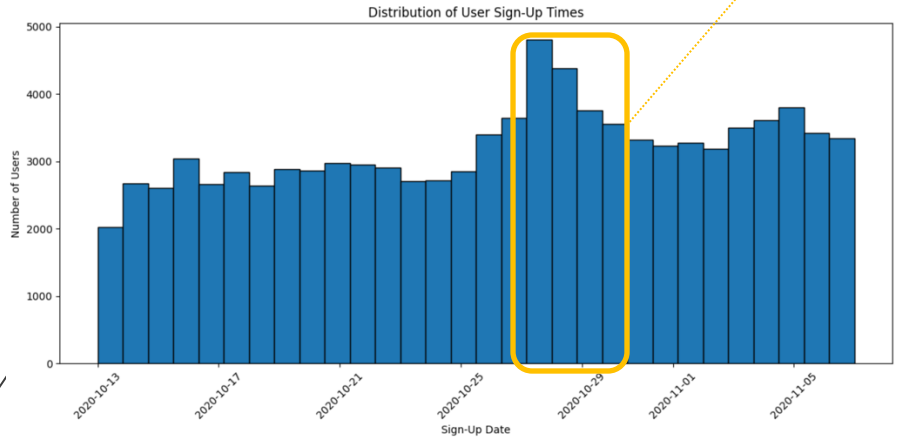




- **Significant drop-off within the first 100 days** may mean that users might not be finding sufficient value early on. To improve the funnel, Perpay give discount incentives to keep users engaged
- **Spikes in user activity near the end of the year** may imply two things. One possibility is that Perpay is promoted more at the end of the year. If not, this may suggest that users are more interested in buying with Perpay at the end of the year.
- **Activity until today** could mean a segment of highly loyal users, indicating that these users may be more attracted to Perpay's model

- ***Important Note**: This graph is constructed using "user_dataset". User reaching each stage for the first time doesn't necessarily mean it's from the same order
- 45.4% of all users signed up in this period never started an application after they entered their salary information (have spending limit assigned). It may be the case that they didn't find the product they were looking for or didn't find a good price. Expanding product selection or price-matching other retailers may help to gain users that start an application
- When facing financial commitment, users become more relucent

# Referral-driven Campaigns, Especially During Seasonal Promotions, Can Drive Significant User Acquisition, With Sustained Engagement Beyond The Initial Spike



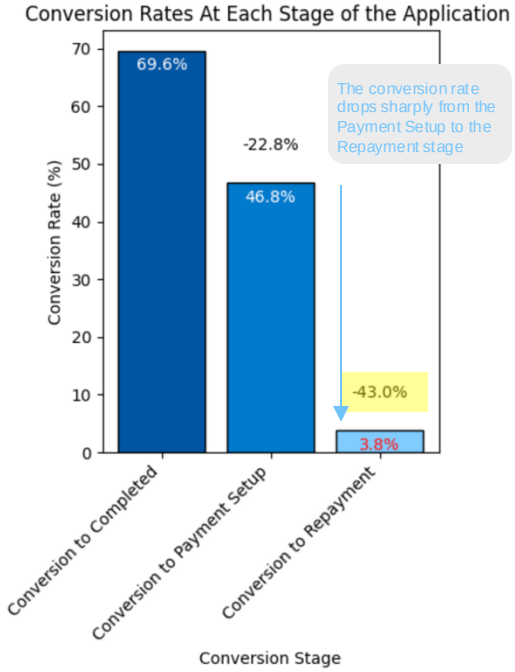

## Key Insights & Recommendation

- The spike in user sign-ups coincides with an increase in referred users
- The surge was likely driven by a referral program, possibly linked to a Halloween promotion.
- Even after the peak, sign-up numbers remained elevated, suggesting a sustained impact of the campaign.
- Perpay's target audience appears highly sensitive to referral-based campaigns. This makes it a potentially effective customer acquisition strategy moving forward.

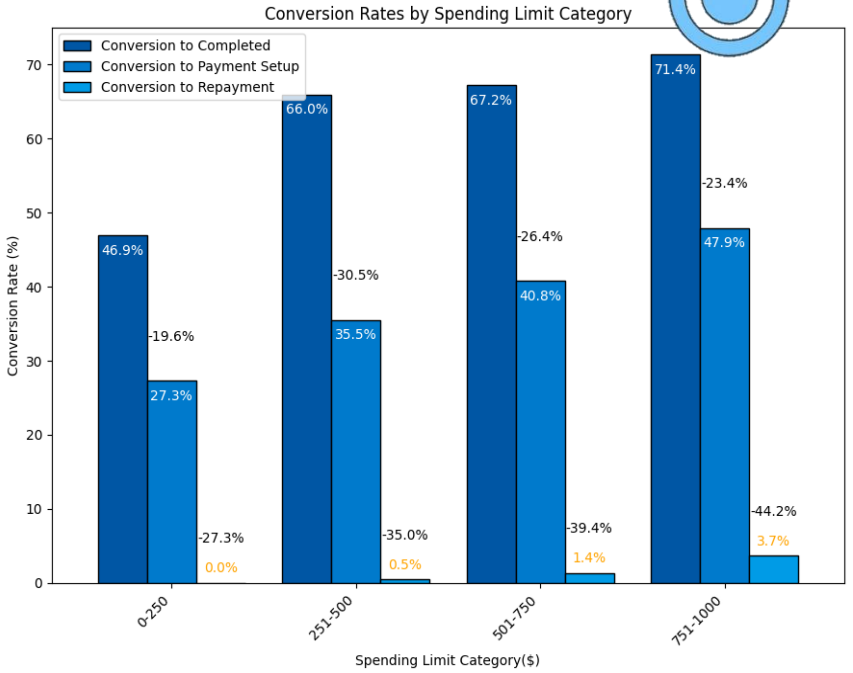
# Monitor Conversion Rates At Each Stage Can Identify Strategies That Enhance Engagement And Drive Improvements Across The Funnel

## Key Metrics to Monitor

- **Conversion to Completed** is the % of orders that successfully reach the application submission stage after starting it. A high rate suggests users are initially motivated and able to navigate the order application process without major obstacles.
- **Conversion to Payment Setup** represents the % of orders that get approved. It indicates how many orders meet the criteria for approval after submitting their applications.
- **Conversion to Repayment** measures the % of orders that reach the repayment stage. It indicates a successful order.



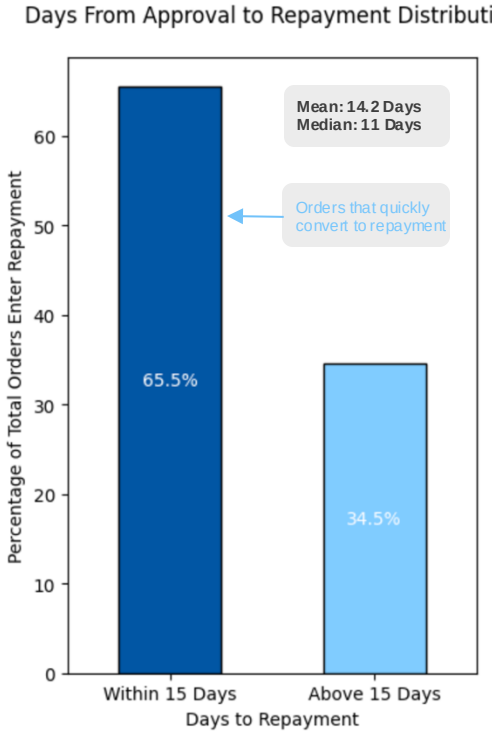

**Recommendation:** To improve conversion at the final stage, consider offering additional incentives, clearer communication, or easier payment options.



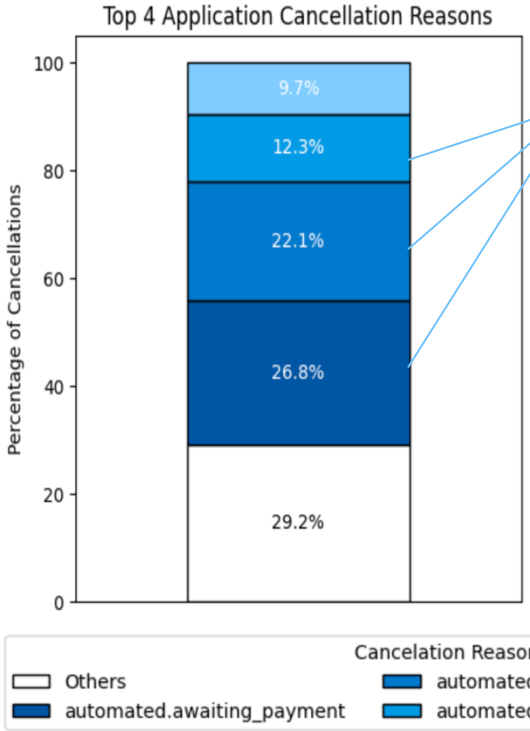

**Segmentation**: The conversion rates vary across different spending limit categories. Generally, higher spending limit groups are more likely to reach the final stage in the funnel*. This suggests that tailoring strategies to each segment, such as personalized incentives or messaging at each stage based on the spending limit assigned to the user, could enhance engagement and improve conversion at each stage of the funnel.

* Based on orders that have matching records in the user dataset. We need more user data to verify there's no bias.

# Investigating The Reasons Behind Longer Repayment Times And Order Cancellations Could Help Identify Opportunities To Improve Order Conversion Rates




- **Why is the elapsed time between approval and repayment an important metric**: Since users are generally paid bi-weekly, an elapsed time of fewer than 15 days suggests quick conversion to repayment.
- **Next Steps:** Investigate why some users take longer to enter repayment and implement targeted incentives to speed up the process.




The top three cancellation reasons are all order abandonment at a stage

- Having order abandonment as the top cancellation reason means Perpay has gained interest but needs to actively remind the users to avoid abandonment
- Implementing email reminders or giving more limited-time promotions could help reduce drop-offs.
- The true reason for cancellation is unclear when a user chooses "Remorse" (9.7%). Maybe more fine-tuned cancel reason options can help future analysis.

# Conclusion

## Key Metrics to Monitor

- Conversion to Complete Application
- Conversion to Payment Setup
- Conversion to Repayment
- Cancelation Reasons
- Time Elapsed Between Approval and Repayment

## Key Next Steps

1. Introduce targeted incentives to bridge the gap of users who enter salary info but never start an application.
2. Simplify the payment process and enhance communication to improve the low conversion to repayment
3. Investigate why some users take over 15 days to repay and implement targeted incentives to speed up this process.
4. Address high cancellation rates due to order abandonment with email reminders or time-limited promotions.
5. Address timestamp inconsistencies and order limits exceeding spending caps to enhance data reliability.

# Appendix: Data Quality Issue And Other Observations

## Data Quality Issue

- **Potential NULL values in cancellation_type:** 40 order cancellations don't have a reason attached. These may be null values in the database. (*This is not a significant issue because there's only a small amount of them*)
- **Timestamp sequential problem in user_dataset**: 158 users have sign-up time after their first application time. This is not possible. (*I have excluded these entries when doing user lifetime analysis*)
- **The total value of orders for some users exceeds their spending limit**: 56 users that are in both datasets have values of orders that enter repayment over their spending limit. This indicates some inconsistencies.

## Other Observations

- **In the order data, there's an abnormally large number of orders by some users** (the top 1 user has 16 orders within the timeframe, but none of them entered repayment). We may want to investigate what caused these users to start multiple orders.
- **The order funnel conversion rate, reason for cancellation, and time to repayment are different for users who just registered (in user_dataset) and existing users (not in user_dataset)**. With more info on the existing users, we can do further analysis of the difference between these two groups.
- **The data is collected during the peak of COVID-19**. User behavior may be different now.