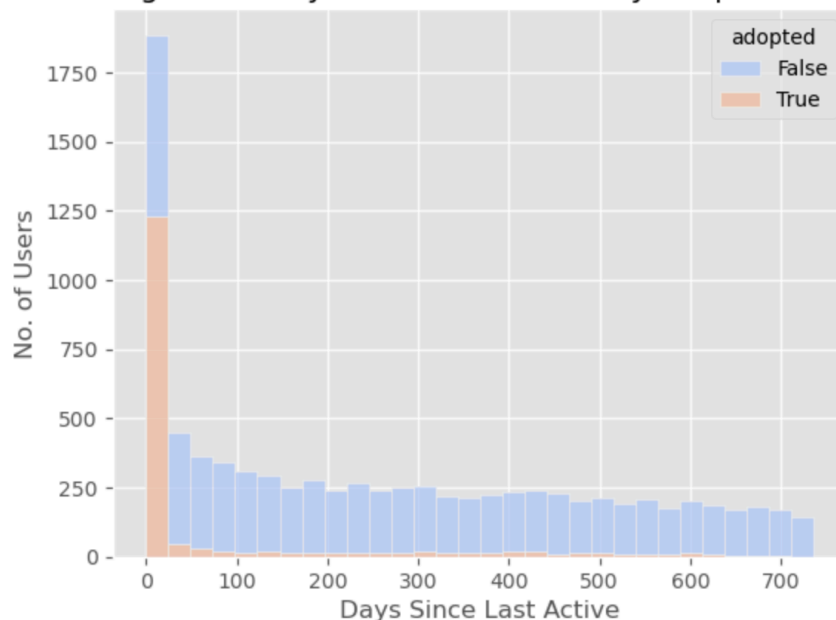# Relax Inc. Challenge Report

Per the data that was received, there were 207,917 logins from 8,823 unique users. Of these, 1,656 were adopted users. The data showed that the number of days since the account's last activity was by far the most important factor in determining if a user will be an adopted user or not. As long as a user has been active in the last 25 days, that user has a much higher probability of being an adopted user.

This fact was further solidified when a Random Forest Classifier was used to predict adopted users. I was able to predict whether a user would be an adopted user or not with an accuracy of 96% and the feature importance of days since last active was 68.5%.

```
Accuracy of test set: 0.9605621033544878
              precision    recall  f1-score   support

       False       0.97      0.99      0.98      1792
        True       0.93      0.85      0.89       414

    accuracy                           0.96      2206
   macro avg       0.95      0.92      0.93      2206
weighted avg       0.96      0.96      0.96      2206
```

```
days_since_last_active                0.685529
account_age_in_days                   0.288184
opted_in_to_mailing_list              0.005390
enabled_for_marketing_drip            0.004767
creation_source_GUEST_INVITE          0.004253
creation_source_SIGNUP                0.003969
creation_source_ORG_INVITE            0.002940
creation_source_SIGNUP_GOOGLE_AUTH    0.002570
creation_source_PERSONAL_PROJECTS     0.002397
dtype: float64
```