Problem Statement

Context: McKinsey Global Publishing runs an email program featuring 40 newsletters and topic-based notifications. Subscriber engagement amplifies McKinsey’s thought leadership among target audiences, including clients and potential clients. Ongoing email communications with subscribers is critical in nurturing and extending those relationships.

Some percentage of email subscribers become inactive within a year. A one-size-fits-all retention strategy was doing little to reengage many of those readers.

Objective

The central objective of this project is to

- Target the right subscribers
- At the right time
- With the right content

To increase user engagement and reduce churn.

Datasets

- User data
  - Demographic & subscription details
- Activity data
  - User engagement data e.g. click/open rate on newsletter and website
- Content data
  - Context type, authorship, URL, topic, industry

Methodology

Target the right subscribers

Time Series User Clustering

Goal: Identify groups of subscribers with similar engagement patterns over time

- Align users to a common starting point to visualize the number of months since user joined
- Filter subscribers that have not reached a 12-month tenure
- Leverage Time Series clustering with user engagement patterns to identify groups of similar users

At the right time

Churn Prediction

Goal: Predict when user groups are at risk of churn

Webull Time-To-Failure Long-Short-Term-Memory (LSTM) network combines survival analysis and deep learning to predict time until churn per user. Additional interpretability was achieved by analyzing the coefficients of traditional survival analysis and regression methods.

- Predict a Weibull probability distribution (defined by parameters alpha and beta) each month, centered around the number of months until churn

With the right content

Content Recommendation

Goal: Re-engage users at risk with similar content to previously opened/clicked

Embedding space

- Compute distance between articles in embedding space and recommend closest article to subscriber’s last engagement

Results

User Clustering

We identified 6 clusters of engaged users

- Clusters of user engagement 13 months since sign-up
- Open Rate (open/delivered) in percentage

Churn Prediction

We predicted months until churn for each user at each time step

- 1.8 months Mean Absolute Error (MAE) out-of-sample with only 6 months of data

A/B Testing

- Ran an A/B testing re-engagement campaign to test recommended strategies
- ~10% Of subscribers headed-towards-churn got re-engaged

Business Impact

- Expected to reduce number of subscribers headed-towards-churn by ~10%
- Delivery of actionable recommendations on when to target subscribers with 1.8 months Mean Absolute Error
- Implemented in production to target at-risk users every month

Future Work

- Automate delivery of re-engagement emails
- Expand methodology to other areas of Publishing - e.g., leveraging content recommendations on the site, identifying disengaged users on the site or app.
- A/B test further re-engagement campaigns at various months before churn

“One of the most actionable hypothesis + recommendations reports I have seen in my three plus decades in publishing, in an area that is vital to the future of McKinsey’s continued ability to reach and engage global audiences in our ongoing ‘insights to impact’ digital storytelling journey.”

Raju Narisetti
Leader and Publisher, Global Publishing

“In my role, leading product development and analytics for McKinsey.com, this work is a standout in its actionable recommendations for our subscriber base. It will enable us to boost engagement, reduce churn, and contribute to converting readers into clients. We are thrilled about the opportunities this analysis will bring.”

Marianne Blum
Director External Engagement, Tech Ecosystem