eXlygenze
POTENTIAL MADE POSSIBLE

HACKATHON @ EXLYGENZE

eXlygenze Overview

eXlygenze is a startup headquarted in Mumbai. We are creators of TruLead, the world's first Internet of Behaviours Product. TruLead is a Human Operating system to co-create enthusiasm and aligned behaviours of all contributors for an enterprise

Problem Statement

Create a Trigger-Notification engine to create, manage and execute all Notifications based on triggers for various Objects from the Application (For example: Objects could be Action Items, Assessments etc which has a due date). There are multiple types of triggers and multiple types of Notifications triggered when a specific trigger is observed in the product. Admin will be able to create rules for triggers and Notifications and the engine should be able to send out a particular Notification on the basis of trigger. The Notifications will be sent to users through various mediums – like in-app notifications, emails, WhatsApp, SMS etc. Trigger-Notification engine will receive data from other modules through APIs and process the data to identify if it's a trigger and accordingly send the notification to user as output.

Deliverables

- Trigger-Notification engine backend
- Web portal for admin to create & configure triggers, notifications, trigger notification mapping
- Intelligent Notification Algorithm (using ML)
- Web portal for user to receive notifications and create custom notifications
- Algorithm for measuring effectiveness of Notifications based on action taken by the user after receiving the notification
- API which can be integrated with existing product
- Source code of the solution
- Working solution
- Presentation on problem statement and solution design and approach
- Recorded video

Detailed Description

A. **Trigger Types**
   Trigger is the event basis which a Notification will be sent to users.

   Type of triggers: *(*Brownie points for working on more than 4 types of triggers)*
   1. Score based
   2. Time based and frequency
   3. Event Based
   4. User's status (Active/ inactive on the app for so many days)
   5. Participation level in a particular activity
   6. Random triggers
   7. Role based

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A) **Trigger Details** (*#For all trigger types, assume that input data is being received by the engine through APIs from some other module*)

Type of triggers:

1. **Score Based**

   For the following modules, admin will have the option to define scores at which notification will be triggered. Each module will have multiple unique factors for which the triggers have to be defined.

   a) Module 1
      - Admin to set the score as per following parameters
        - Number of transactions per day/ week/ month for each factor (possible 8-10 factors) in module 1
        - Alert employee when sharing feedback with same colleague – after how many transactions?
        - Daily/ weekly/ monthly score

   b) Module 2
      - Admin will set score as per following parameters:
        - Factor 1 - Monthly achievement –
          - Give options for setting the range and trigger as per the range
            - Achievement <50%: red ; 80%> Achievement >50%: Amber, Achievement >80%: Green

2. **Time based and frequency**
   a) Timeline related – for factors in each module (dates as timeline)
   b) Daily activity update timeline (example before 7 pm)
   c) Assessment
      - Admin can set up the timeline when the trigger has to be sent – example: 1 week before end date, everyday for last 4 days, 2 hrs before the end time of assessment

3. **Event Based**
   - Organisation wide event
      i. Example: Annual meeting – send a trigger 2 days before the event
   - Process events
      i. Admin can configure custom notifications for organisation process events, for example: Performance rating closing date, Tax details submission date

4. **User's status (Active/ inactive on the app for so many days)**
   - Admin can set frequency that they wish to see the employee on the app. For example – if the frequency is set as daily – then system will send trigger at pre define time (say 5 pm – make it configurable) – to all users who haven't logged into app today and Notification them to login and participate in some activity

5. **Participation level in a particular activity**
   - Admin launches a new activity – example poll, survey; then the admin will be able to configure trigger for participating in the activity.

6. **Random triggers**
   - Admin can schedule random triggers and select participant group who should receive the notification

7. **Role based**
   - Admin can set certain triggers based on roles

o   Example: all managers will receive a trigger before their team review meeting that they have to ask opinions of their team members

B) NOTIFICATION BANK

Notification bank has to be created for each Notification type.
- o   Ready Notification Bank – Participants will create sample notifications for each category
- o   Custom Notification bank – option for admin to create custom notifications.

Notification types *(#Brownie points for developing creative notifications to increase engagement level of users. Participants could use creative freedom to define new types of notifications)*

1. Poke: Tells you that you have to do something. Example – pls feed in your data.
2. Pulse: Finding info about the group – mood feeling, sentiment related
3. Query: Questions about events – example: how are you feeling after the meeting. Query can also be about ideas, suggestions
4. Alert: Alert is about something that is going to happen- example – you have a meeting, alerts can also be about patterns
5. Exchange: You are asked to share information, challenge, one to one or one to many
6. Prompt: Prompt is against an ideal – suggestion or appreciation
7. Red Flag: It is a warning – significant gap against ideal
8. Rewards: Anything appreciative, example – who do you want to reward today

C) MAPPING

Web portal for Admin to map Notifications to each trigger type

D) SOCIAL NOTIFICATION BANK
- o   Web portal for User to define certain Notifications that they prefer, for example: remind for daily activity update at 7pm every day.
- o   User will be able to send the Notification to admin as a suggestion to be added in the Notification bank
- o   Machine Learning to augment the Notification bank basis the Notifications that are most effective for users. Effectiveness to be measured basis the action that users take after receiving the notification *(#sample data will be shared)*

E) Notification Effective Analytics
- •   Analyse the action taken by user after the Notification and show trend in terms of change in behaviour/ performance after the Notification

Technology

Python Flask, Angular, MySQL13