

NotiSmart

A new way of Trigger-Notification engines



Made by
Team 404: Found

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INTRO TO NOTISMART

We have made a smart and configurable multi-threaded Trigger Notification Engine in Flask to create and execute all your notifications based on triggers for various conditions from the Application.

Admin can customize the notification triggers and the engine can send out a particular Notification on the basis of a particular trigger.

The Notifications can be sent to users through various mediums – like on-page notifications, emails, browser push notifications, WhatsApp and SMS.

Technologies Used

Front-end

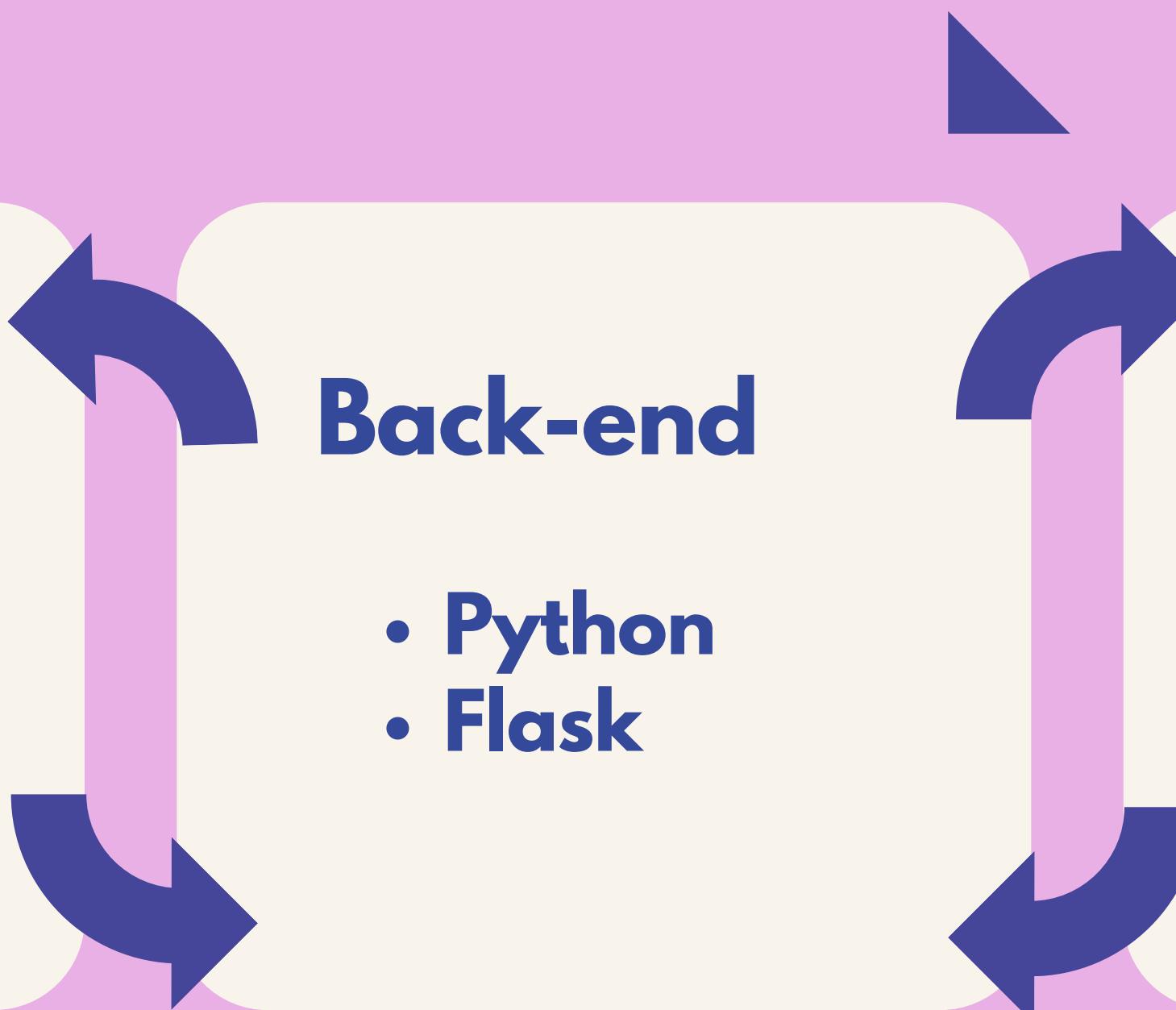
- HTML
- Tailwind CSS
- JavaScript

Back-end

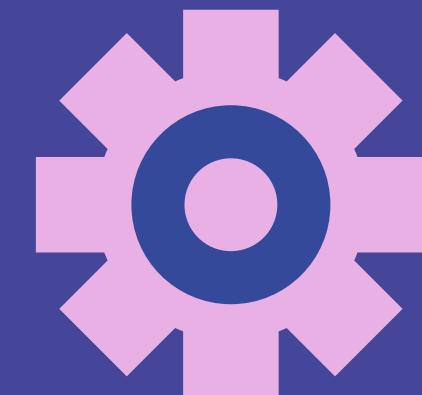
- Python
- Flask

Database

- MySQL database



HOW IT WORKS



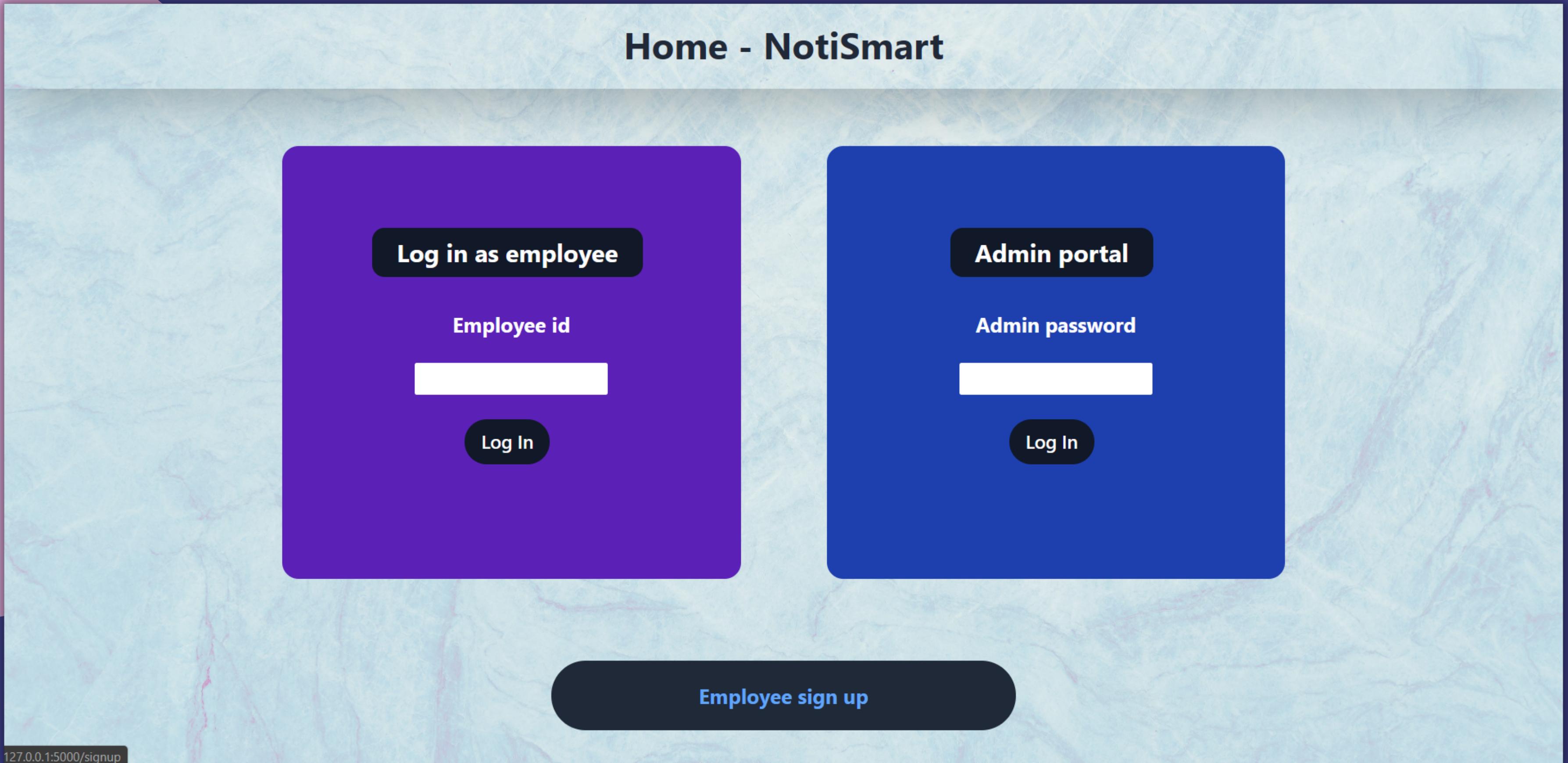
Project link:
<https://github.com/AbhiSinha08/Build-a-Thon-Project>

```
<meta name="viewport" content="width=device-width, initial-scale=1.0" />
<meta name="theme-color" content="#1e2327">
<meta name="color-scheme" content="light" />
<title> Admin Portal - NotiSmart </title>
<link rel="stylesheet" href="static/styles.css" />
```

```
1 // Importing framework and libraries
2 from flask import Flask, render_template, request, redirect, url_for
3 import threading
4 from collections import defaultdict
5 import json
6 import db
7 import timer
8 import bots.mail
9 if db.WA_OPTION:
10     import bots.whatsapp
```

```
1 async function getapi(url) {
2     // Getting response from the server
3     const response = await fetch(url);
4     var data = await response.json();
5     // console.log(data);
6     //
7     // Checking if a new notification is received
8     if (data.type != "NULL") {
9         show(data);
10    }
```

**From Home Page we can access Admin portal,
Employee log in and sign up form**



Employees can sign up using this signup form...

Employee sign up

Name

Employee id

Age

Sex: Female Male Others

Contact Details

Position: CEO Team leader Manager Staff

Sign up

POST localhost:5000/api

Params Auth Headers (8) Body ● Pre-req. Tests S

raw JSON

```
1 {  
2   "Header": "Signup",  
3   "Name": "Karuna",  
4   "Employee_id": 123456,  
5   "Sex": "F",  
6   "Age": 19,  
7   "Email": "karuna.sharma@iiitg.ac.in",  
8   "Phone": "9876543210",  
9   "Position": "Manager"  
10 }
```

... or using this simple API with a POST request

The Admin Portal is password protected and from here, Admin can send notifications or define various types of triggers for auto-generating notifications

Admin Portal

HOME

Create new notification

Score based Notification (selected)

User Status Notification

Time based Notification

Event Notification

Group Notification

Daily Weekly Monthly

Set Minimal Transaction Score

Set Optimal Transaction Score

Set Minimum Monthly Ahievement

Set Optimal Monthly Achievement

Create

Notification suggestions

REFRESH

 Congratulations !!! NotiSmart Notification engine is integrated into our system and is working perfectly fine. Everyone is requested to register themselves and start using it for receiving and managing all your work notifications smartly.

Notify all Discard suggestion

 Sample Notification: Reminder for everyone to attend self-development workshop today at 6 PM with some special speakers

Notify all Discard suggestion

Create new notification

Notification type: Reward Reminder Alert

Roles to notify: CEO Managers Staffs Team leaders

Notification description
The deadline for submitting your team reports for the ongoing project is tomorrow. Please submit your team reports ASAP.

Set Notification Time For inactivity Frequency

Create new notification

Daily Weekly Monthly Set Minimum Monthly Achievement

Set Minimal Transaction Score

Set Optimal Transaction Score

Notification type: Reward Reminder Alert

Set Notification Time Everyday For

Detailed Notification
Reminder to attend series of self-development workshops everyday from 6 PM for the entire week

Various configurable notifications and triggers types including Score based, Event and Time based with customizable frequency, role based and more ...

... The data for various types of triggers can be fed to the engine from other applications through APIs via a POST request ...

localhost:5000/api

POST

Params Auth Headers (8) Body Pre-req. Tests Settings

raw JSON

```
1 {  
2   "Header": "Score",  
3   "Employee_id": 123456,  
4   "Score": 25  
5 }
```

API for adding score to a user

localhost:5000/api

POST

Params Auth Headers (8) Body Pre-req. Tests

raw JSON

```
1 {  
2   "Header": "Monthly_Achievement",  
3   "Employee_id": 123456,  
4   "Achievement %": 75  
5 }
```

API for sending monthly achievement of a user

localhost:5000/api

POST

Params Auth Headers (8) Body Pre-req. Tests

raw JSON

```
1 {  
2   "Header": "Activity_Status",  
3   "Employee_id": 123456,  
4   "Status": "Active"  
5 }
```

API for sending user's activity status in some other application

... The Admin can also see suggested notifications from the users and take different actions on each of them

Notify All - Send suggested notification to everyone
Discard - Remove this suggestion

Notification suggestions

⟳ REFRESH



Congratulations !!! NotiSmart Notification engine is integrated into our system and is working perfectly fine. Everyone is requested to register themselves and start using it for receiving and managing all your work notifications smartly.

Notify all

Discard suggestion



Sample Notification: Reminder for everyone to attend self-development workshop today at 6 PM with some special speakers

Notify all

Discard suggestion

From the Employee Portal, employees can create configurable personal reminders, suggest admin to notify something to others and receive new notifications from the server without reloading via server sent events

Employee Window

HOME Employee ID: 123456

Create New Notification For Yourself

Notification Time: 08:15 AM Everyday For Days

Detailed Notification

Reminder for taking progress report to the office for project meeting.

Suggestion For New Notification To Admin

Notification type Reward Reminder Alert

Detailed Notification

Sample Notification: Reminder for everyone to attend self-development workshop today at 6 PM with some special speakers

New Notifications

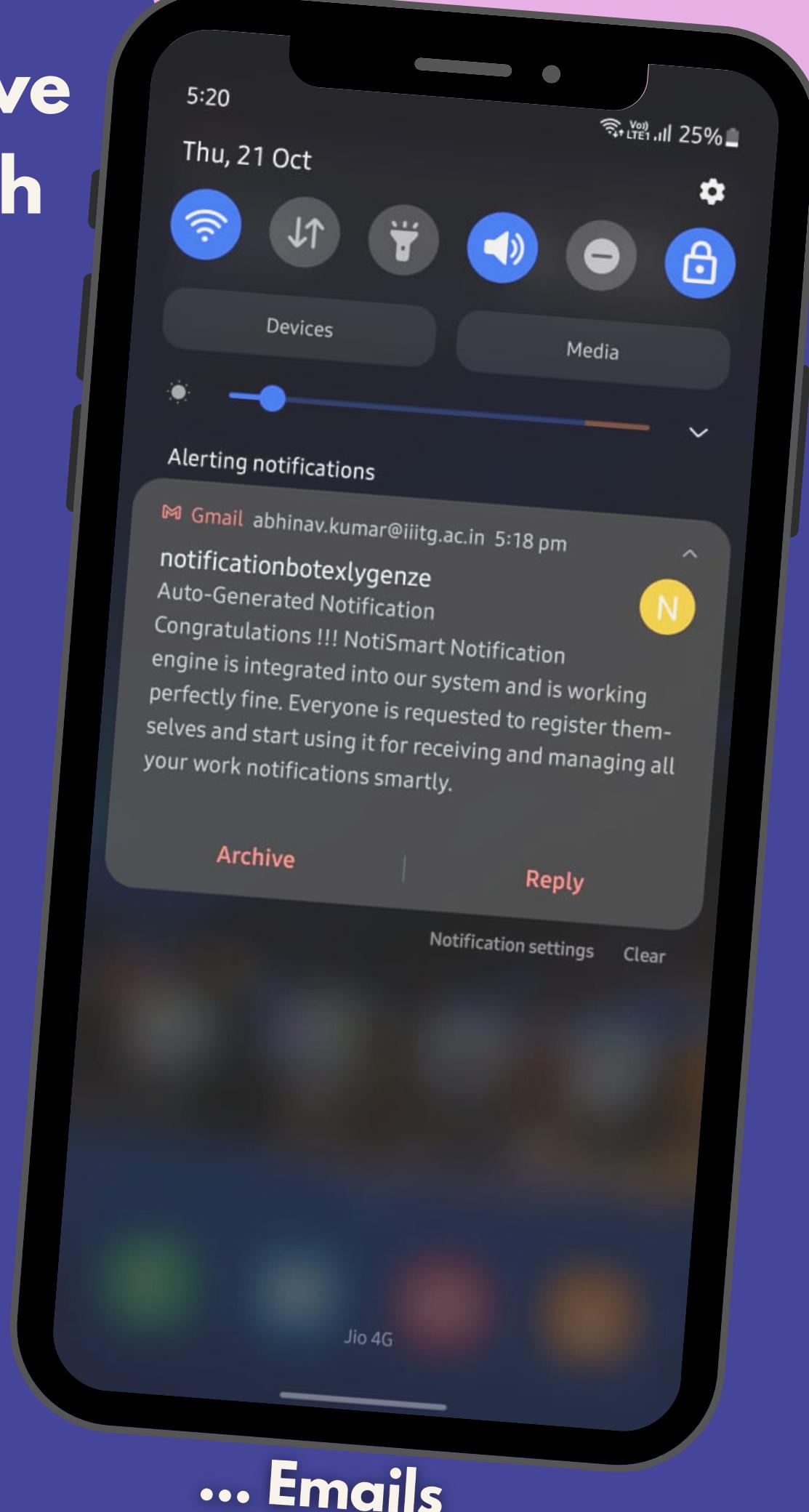
 Congratulations !!! NotiSmart Notification engine is integrated into our system and is working perfectly fine. Everyone is requested to register themselves and start using it for receiving and managing all your work notifications smartly.

 Warning! Your transaction score for last week was below minimum score defined by the admin. Please try to perform better this week

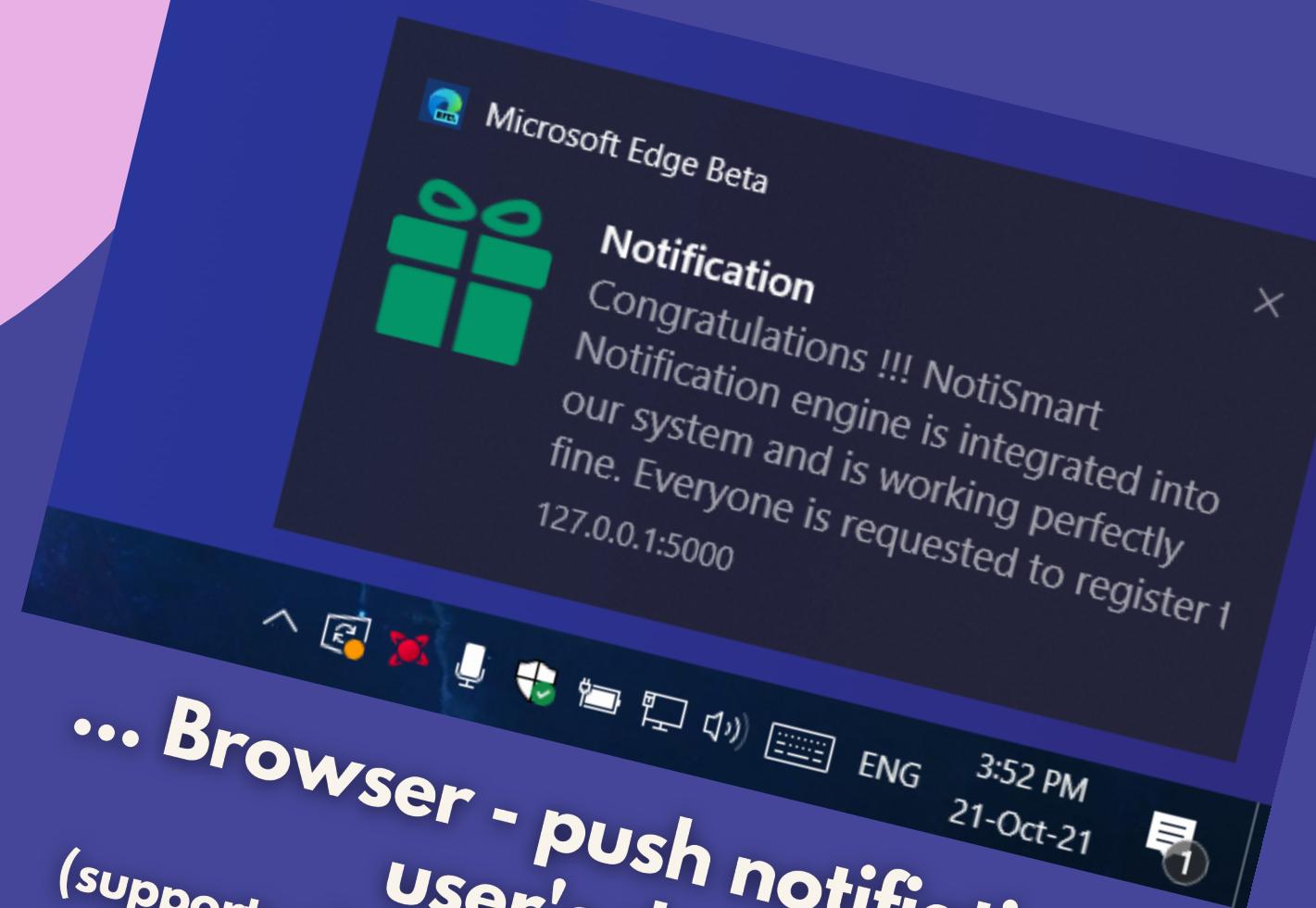
The Employees can receive new notifications through various mediums like...



... On page notifications on Employee's portals



... Emails



... Browser - push notifications to User's devices (supports all Windows, Android, Linux, MacOS, iOS devices)



... WhatsApp messages

Further Improvements in NotiSmart

- 1  **OTP based login system for employees**
- 2  **An algorithm to analyze the effectiveness of notifications**
- 3  **Integration of polls and surveys in notifications**
- 4  **A machine learning model to auto generate notifications**
- 5  **A telegram bot to send and receive notifications**

Thank You