Name-Tanishq Pathania

Phone no.- 9103266112

Email - tanishqpathania508@gmail.com

Problem Statement 1 :- A Company connects buyers with suppliers via Web, Mobile Web, Android App and iPhoneApp.There is a virtual number (VN) allocated for every supplier listed with Company which is used for tracking purposes.

For e.g. a supplier has an actual number 123 and we allocated a virtual number 456 to this merchant. On the Justdial portal, we show only 456 virtual number on the supplier details section and when the buyer calls up 456, we forward the call to 123 to connect with the supplier. By calling up on 456, we are able to keep a track on who has called the supplier and help us to provide a monthly report to the supplier on the number of calls generated via Justdial portal.

On 22-Nov-2024 (Friday), there was a drop of VN calls by 20% compared to the preceding 3 Friday. Please define a detailed root-case analysis flowchart to identify the reason of drop.

SOLUTION :-
Title: Analysis of 20% Drop in Virtual Number Calls on 22-Nov-2024.

Step 1. Data collection

- Collecting all the Virtual number call data from the last 4 Fridays (including 22-Nov-2024).
- Also Gathering systems logs data that help in understanding that there is any technical error or issue.

Step 2. Analysis

- Comparing Virtual number call data helps identify the drop and patterns.
- Check or investigate any external event or festival that could impact call volume.
- Also check if there are any competitors marketing strategies that lead to drop.
- Analysis the User behaviour and traffic from previous trends.

Step 3. Internal System Checks

- Confirm that there is any maintenance, system updates or any server down on that day.
- Checks accessibility of VN routing systems on that day.

Step 4. User & Supplier Feedback & Reports

- Review any user or supplier feedback about the drop.
- Look for any users that have issues in making calls.
- Also Check that the supplier receives no calls.

Step 5. Consolidated & Hypothesis Generation

- Look & review the patterns and common factors (technical issue , external factor , marketing-related issue) that can explain about the drop.
- Formulate the hypothesis for the potential root cause based on above patterns.

Step 6. Hypothesis Testing

- **Technical test** :- Check all Virtual Numbers mapping with actual numbers are intact or not.
- **External Factor** :- Investigate any event or holiday influenced the drop.
- **Marketing Factor** :- Check if there are any changes in marketing strategy.

Step 7. Root Cause Identification

- Based on the hypothesis testing, identify the main root cause of the drop. And it if necessary

Step 8. Solution Implemented

- Implement the Solution to address the root cause of the Problem.
- Continuously monitor Virtual number calls to ensure the issue is resolved.

Following these steps , we can systematically identify and address the reason for the 20% drop in VN calls on 22-Nov-2024.

Problem Statement 2 :- Create a 2 tactile button TV remote. Please note that there will be only 2 buttons allowed i.e. A and B. There is voice recognition or gesture movement allowed. There is no + or - allowed on the same button.

The button can just be pressed down and upon releasing - the button will come up. Based on the priority of functions and usability - Create a 2 button TV remote.

P.S. Assume this TV remote is for an earlier type cable based television (i.e. Dumb TV) and NOT a smart TV. Also, In the TV remote design – There is NO voice command or NO gesture movement allowed or 2-in-1 button allowed (i.e. looks like a single long button, but underneath there is 2 buttons – This is not allowed) Functionalities needs to be accommodated within 2 tactile buttons only.

SOLUTION :-

Title: Design a TV remote for old cabled televisions, utilising only two tactile buttons labelled as A and B.

Prioritisation Functions:

We have to prioritise the most essential function only.

- **Power On / Off**
- **Channel Switching Up / Down**
- **Volume Control Up / Down**
- **Mute / Unmute**

Function Mapping :-

1. Single Press Button A - Channel up
2. Single Press Button B - Channel down
3. Press and hold Button A - Volume up
4. Press and hold Button B - Volume down.
5. Simultaneous Press of Button A and Button B - Power On/Off
6. Double press Button A - Mute
7. Double Press Button B - Unmute

Product Design :

- Ensure the buttons are easy to press and distinguishable by touch.
- Provide sensory or auditory feedback to users to confirm button presses.
- Keep the design simple to avoid confusion.

Therefore using combinations of single presses, double presses, Press & Hold and simultaneous press actions , this 2-button remote can effectively control functions of an old cabled television.

Problem Statement 3:- You are working as PM for a private bank and you have a OTP based login which is safe and secure based verification. However, it has been found out that OTP SMS doesn't always reach users on time due to network congestion due to which many users are dropping from the login page.

You have been tasked to define a better experience for the user to overcome the above problem statement.

SOLUTION :-

Title: To address the issue of OTP SMS delays due to network congestion & to improve the user experience.

Improve OTP SMS Delivery:

- Collaborate with telecom Operators to prioritise OTP message.
- Implement a Retry Tool or Option that allow to send the OTP again if it isn't receive to user within certain time frame.

Different Option For OTP delivery:

Multiple options Provide to user to receive their OTP ,So they can choose the most reliable method for their situation.

Options:

- **SMS**: Continue to offer SMS as an option.
- **Email**: Allow users to receive OTPs via email.
- **Voice Call**: Allow User to Receive OTPs through an automated voice call.
- **Push Notifications**: Use the banks mobile app to send OTPs via notifications.

Enhancing User Experience:

Improve User experience by Adding some Features .

Progress Indicator: Showing a progress indicator or bar while waiting for the OTP, reassuring the user that OTP is on its way & declined the rate of user dropping from the login page.

Customer Support: Provide easy access to customer support for users to encounter issues.

Provide Immediate Help Assistance :

Help Button: Add a help button on the OTP screen that connects the user to customer support for immediate assistance.

FAQs: Include a brief FAQ section explaining possible delays and alternative options for receiving OTPs.

Therefore Implementing a Different channel OTP delivery system, offering customer support & assistance and enhancing the overall user experience, the bank can significantly reduce the number of users dropping off from the login page due to OTP delays.