PROBLEM STATEMENT

for Veripay

(A Third party payment confirmation App)

Prepared for
Group 62
TechyNerds

CONTENTS

BACKGROUND

Business transactions is an economic event involving the movement of money, goods or services usually between two or more parties.

To engage in a business transaction, the business exchange must be measurable in monetary value so it can be recorded for accounting purposes. Business transactions will affect the finances of the company or organization involved. There are different ways to classify business transactions which include cash and credit transactions. When a transaction is classified as a cash transaction, that means the payment was received or paid in cash at the time the transaction occurred. In a credit transaction, the payment is made either via credit card payment or mobile app transfer (in essence, cash is not involved at the time of sale).

In a situation where a kidney patient at a dialysis clinic have to make payment before commencement of treatment and such patient is not with cash to make payment and only left with the option of making a mobile app transfer but was delayed due to the clinics standing policy of confirming payment before treatment and the account officer is not around or in a pharmacy store or a petty trader shop that the salesperson has to one way or the other confirm payment which they usually rely on taking customers number or a bank debit alert and this often leads to delay in business process or unsatisfied customers or maybe loss of customer, our product offers to provide payment solution that enables cashier and sales person to instantly confirm these payments without depending on the business owner or accountant in order carry out business without delay and also reducing the risk of being shown fake debit alert by customers.

PROBLEM STATEMENT

The need for a better option for a sales person or cashier in a small or medium business enterprise to confirm customer's payment without depending on the business owner is ever increasing and has become a bottleneck in the business process due to other inefficient method of calling the business owner to confirm, take down customer's number or checking the customer's debit alert to confirm the customer's payment.

PURPOSE

The main objective of the project is to build a platform that will provide users with instant access to customer's payment confirmation so as to eliminate waste of time and resolve business issues in cases of emergency.

Specifically, to simplify the bank transfer option for businesses and customers of small and medium enterprises and make payment via transfer, the number one channel for payment when conducting business.

SCOPE

Providing a platform that makes payment confirmation easier and faster without causing a delay in discharging a service or a transaction of business with a customer when the business owner that is to confirm payment is not available, however the employee will not have access to the business account total balance and cannot initiate a transfer to other bank account or resolve issues rising from the bank

Constraints include:

- Lack of funds to execute the project
- Short time bound to execute the project
- Bank policies restriction on giving a third party to access their customer's account.
- Poor internet network

SIGNIFICANCE

This project shows the importance of payment confirmation in conducting business transactions and also brings out solutions to the challenges faced by small and medium business enterprises in discharging a service and how best our service can be utilized to resolve payment confirmation faced by small and medium enterprises. This will contribute to the finance, IT support and commerce sector to improve efficiency and increase revenue generation as it allows more business transactions in a shorter time.

METHODOLOGY

This project was carried out by conducting research through interaction with business owners and employees. This was carried out to find out their business challenges and how technology can be applied to help in providing solutions. A few challenges were cited during our interactive phase. After multiple brainstorming sessions by the members of the capstone group, a peculiar problem and solution was identified.

A need for a secure and efficient payment confirmation was identified as a challenge by most businesses. The team members came up with an idea to build an app to confirm payments transactions for businesses. A problem statement and name were assigned to the project. The required tasks and skill sets for the completion of the project were summarized. Tasks were assigned out to each member of the team based on their skill set and learning track.

The data scientists proceeded to develop questionnaires for a survey that will guide in developing the product and satisfying our intended users. The survey was administered and data was obtained within a period of five days. The obtained data was cleaned and prepared for exploratory data analysis and visualization. The data analytic tools employed include Microsoft Excel, Python and Power BI.

From the visualized data, meaningful insights were generated and communicated to all members of the team. The insights served as a guide in product development, optimization and satisfying our consumers.

Furthermore, appropriate documentation was carried out throughout the capstone project.

DATA

Data collection

Data collection and analysis were carried out to give us insights on our proposed product. A questionnaire was developed based on the problem statement and information required from our target product users to develop the product. The questionnaire consisted of both qualitative and quantitative questions. The questions were developed for business owners or employers and the employees.

Data collection tools

An online based survey was used to obtain the data. Google form was used to administer the questionnaire to our target users for a period of 5 days. A total of 116 responses were obtained. The responses were exported on a spreadsheet to Microsoft Excel for data preparation and analysis
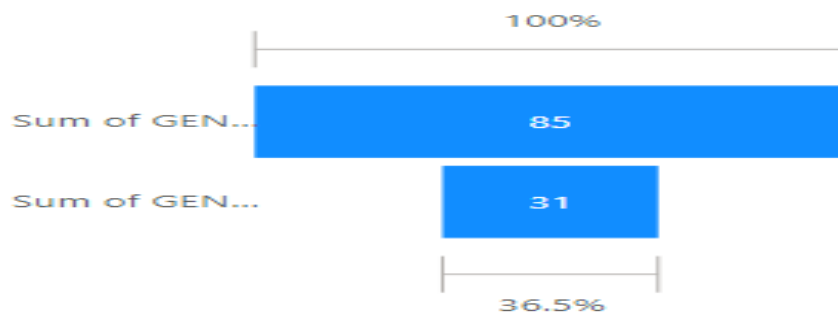
Data preparation

The data was cleaned using Microsoft Excel and Python in preparation for exploratory data analysis and visualization. The data was split according to the employer/business owner and employee responses. The missing values were filled using the mode for the categorical data. Numerical values were assigned to the different categories of the responses using the get_dummies method on python. This was carried out to group the data and for easy visualization. The output was saved as a comma separated value (csv) file and imported to Microsoft Power Business Intelligence (Power BI) for visualization.

Data visualization

A_R_18-24, A_R_25-34, A_R_3...

● Sum of A...   ● Sum of A...   ● Sum of A...

80

60

40

20

0

Sum of AR_18-24, Sum of AR_25-34...
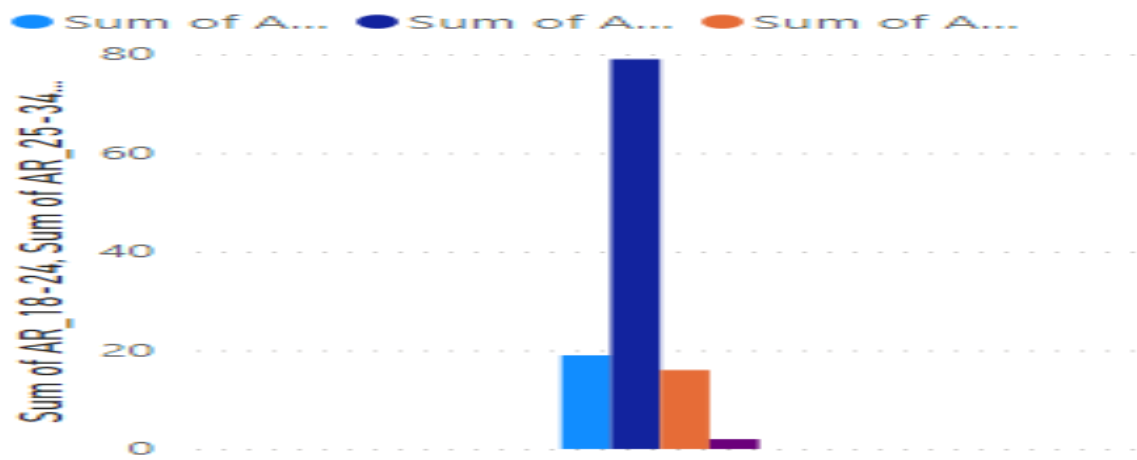
Sum of GENDER_Female, Sum ...

100%

Sum of GEN... | 85

Sum of GEN... | 31

36.5%

Sum of PHONE_CALL_Every time a transaction is mad...

● Sum of PHONE_C... ● Sum of PHONE... ● Sum of PH... ● Sum of PR...

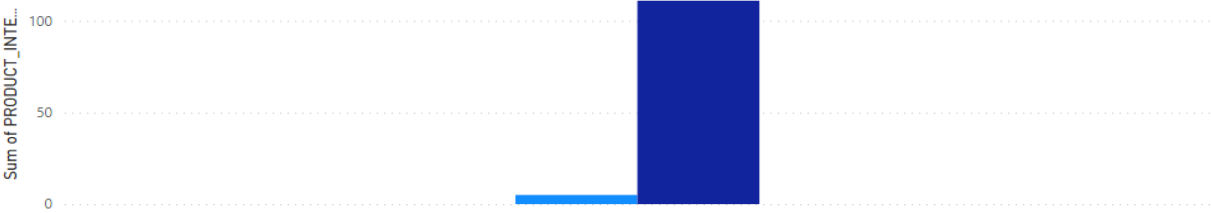## Sum of LOST_CUSTOMER_No, Sum of LOST_CUSTOME...

24 (20.69%)

(79.31%)

● Sum of LOST_CU...
● Sum of LOST_CU...

Sum of PRODUCT_INTEREST_No, Sum of PRODUCT_INTEREST_Yes
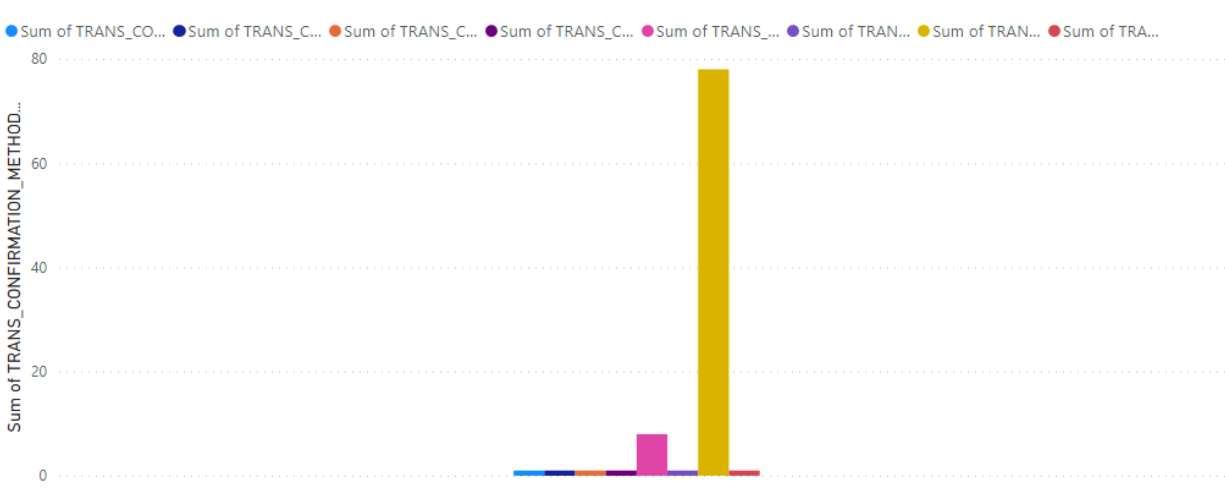
● Sum of PRODUCT_INTEREST_No ● Sum of PRODUCT_INTEREST_Yes

100

50

0

Sum of PRODUCT_SECURITY_Not secure, Sum of PRODUCT_SECURITY_Secure, Sum of PRODUCT_SECURITY_Somewhat secure

● Sum of PRODUCT_SECURITY_Not secure ● Sum of PRODUCT_SECURITY_Secure ● Sum of PRODUCT_SECURITY_Somewhat secure
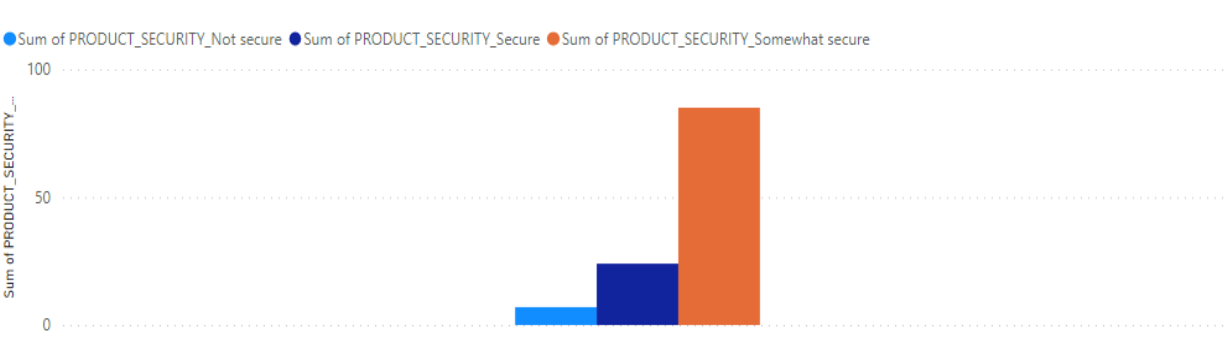
Sum of TRANS_CONFIRMATION_METHOD_Email or app, Sum of TRANS_CONFIRMATION_METHOD_I DON'T CONFIRM TRANSA...

● Sum of TRANS_CO... ● Sum of TRANS_C... ● Sum of TRANS_C... ● Sum of TRANS_C... ● Sum of TRANS_... ● Sum of TRAN... ● Sum of TRAN... ● Sum of TRA...

Sum of STATUS_Employee, Sum of STATUS_Business owner, Sum of STAT...

● Sum of STATUS_Employee ● Sum of STATUS_Business owner ● Sum of STATUS_Employer

Sum of RECEIVE_ALERT_No, Sum of RECEIVE_ALERT_Yes
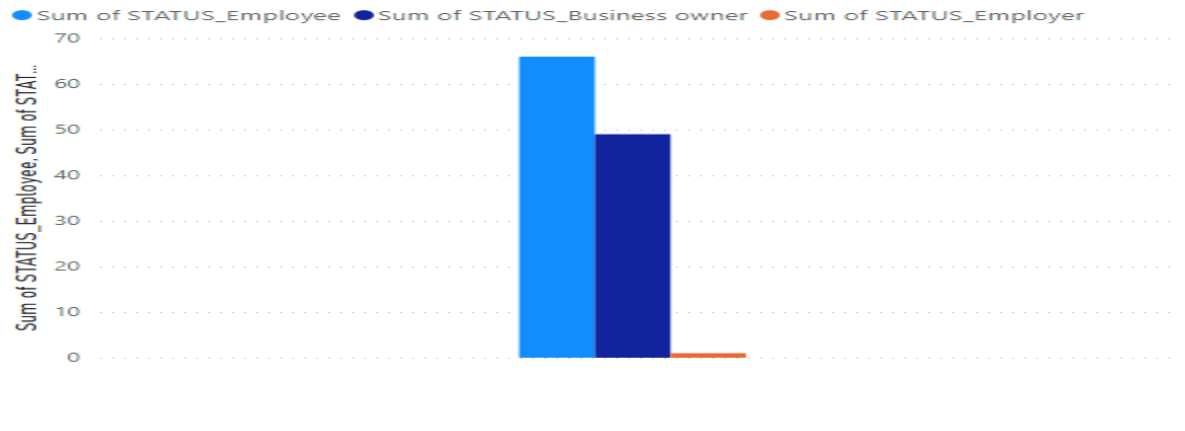
● Sum of RECEIVE_ALERT_No ● Sum of RECEIVE_ALERT_Yes

Sum of RESPONSIBLE_FOR_ALERT_No, Sum of RESPONSIBLE_FOR_ALERT_...
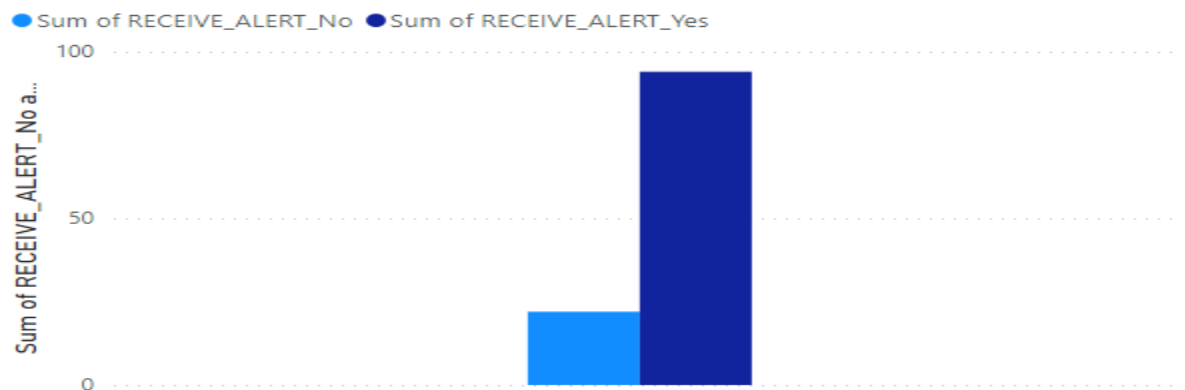
● Sum of RESPONSIBLE_FOR_ALERT_No ● Sum of RESPONSIBLE_FOR_ALERT_Yes
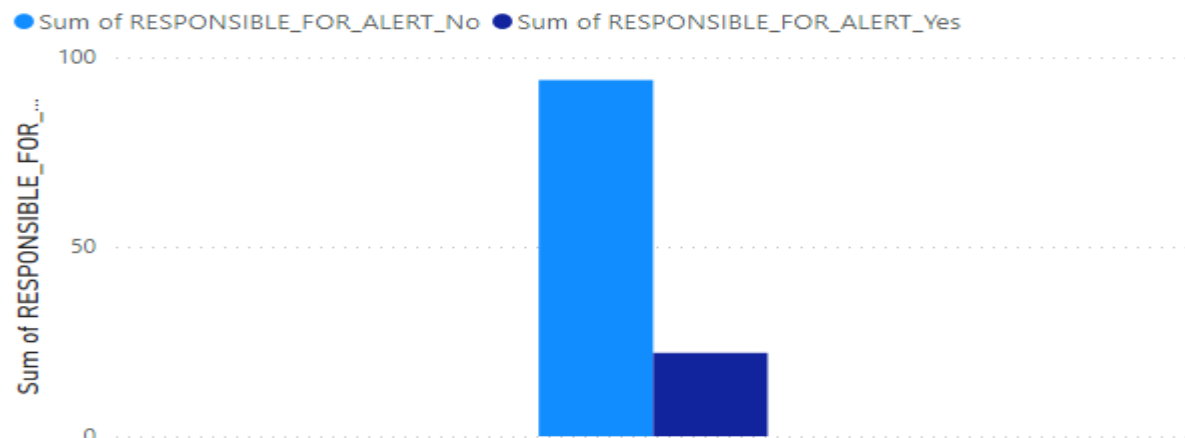
SUMMARY OF INSIGHTS FROM DATA

• A total of 116 responses was recorded, 79 respondents were within the age range of 25-34, followed by 19 respondents within the age range of 18-24. The total number of The females were 85 and the males 31.

• About 49 respondents were business owners, 66 were employees and 1 employer. A majority of our responses were from small scale business owners and a few from medium scale business owners.

• Most of the businesses have less than 5 branches and a number of 1-4 employees.

• Transaction alerts for businesses are majorly received by the business owners or employers and only few employees have access to the privilege of receiving alerts.

• Payment confirmation methods includes phone calls to the business owners, customers debit alerts, emails or apps and through alerts on company phones. A major number of responses stated that payments were confirmed through phone calls and very few confirmations through customers' debit alerts and emails.

• About 80 responses indicated that calls were made every time a transaction was made, 19 responses indicated occasionally calls and 17 indicated that calls were rarely made to confirm transactions. This is an indication that there is a need to confirm payment transactions.

• Up to 24 respondents had lost customers due to delays in payment confirmation. This emphasizes the need for a secure efficient payment confirmation method.

• Only 24 respondents believe that payment confirmation apps are secure, 85 indicated it is somewhat secure and 7 respondents believe it is not secure. Security features should be included in the product to make our product users feel safe and secure while using our product.

• A total number of 111 (95.6%) of our respondents are interested in the product and categorized the product as very important

• The desirable features for our product include; customizable transaction categories, nonaccess to account balance, secure authentication and real time notifications.

• In conclusion, 96 (82.76%) of our respondents are willing to pay for our product and have requested to be contacted when it is ready

DELIVERABLES

1. Web app Development
2. Securing Marketing Channels
3. Well documented report on the project

REFERENCE

https://www.contractscounsel.com/t/us/business-transaction