

# CALL DETAIL RECORD ANALYSIS AND REPORT GENERATION USING DATA MINING TECHNIQUE.

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**Abstract:** This system is an attempt to develop and advanced and clear understanding of the call record report. Call Detail Record (CDR) is a detailed record of all calls through the telephone exchange or any other means of communication. The record is kept by the telephone exchange involved and contains call details such as call time, call duration, source number and destination, call completion status, etc. CDRs are created by telephone billing systems. CDRs are saved by rotating the transmitter until the end of the call. CDRs can be used to support the operation of a telephone company by providing information about incorrect calls. Route traffic value estimates can also be obtained.

**Keywords:** Collaborating Filtering, Decision Tree, Graph Representation, Tower Location.

## I. INTRODUCTION

A call detail record, or CDR, is a thorough log of every call made through phone or other communication channel. The associated telephone exchange maintains the record, which includes call information such call time, call duration, source and destination numbers, call completion status, etc. Telephone billing systems produce CDRs. By turning the transmitter till the call has ended, CDRs can be saved. By providing details regarding erroneous calls, CDRs can help a telephone company run more smoothly. Estimates of route traffic values are also available. The registrar in charge of a certain account may request to download the CDR for that account. The CDR includes details about all incoming calls in the call exchange. When necessary, telephone information records are crucial for compliance and serve as a valuable revenue stream for telephone service providers. CDR, a file that contains all consumption information, including source and destination, IP usage time, and the total amount charged at the moment of payment, is also used for VOIP. By exchanging information over the phone in the form of tickets regarding specific clients or users, telephone information records are kept.

## II. EXISTING SYSTEM

The investigation officer now needs assistance from a service provider to establish the call record, and the results that are produced are Excel Sheets that are difficult to grasp. As a result, the investigative process takes longer, and there is a greater likelihood that the data would be misunderstood because there is no visual representation of the data.

### 1. Ability To Play Call-Of-Interest Voice Files From Local Or Ftp Directory.

The file name of each call is also provided in our CDR analysis tools, along with instructions on how to capture voice recordings. You can filter calls of particular interest using the upgraded Excel® addin and listen to voice files connected to this phone using a third-party audio editing programme. Using audio editing tools, you can also modify the spreadsheet such that it downloads these voice files to a particular directory after playing.

### 2. Organize CDR Data From Different Applications Into A Single GUI

Various call monitoring programmes could yield various single-call analytical outcomes. The style, columns, and type of data may vary from record output. These records can be successfully imported and named in Excel® using a key identifier id that links all of these outcomes to the phone. One can make a customised GUI in Excel® to view all phone details and records from various phone-related programmes.

This snapshot, for instance, displays ISDN call recording records for two different programmes, one of which creates voice band analysis and the other call summaries with caller number, phone number, timestamp, and details of call signing events. Excel® VBA is used to combine all of them into a single GUI for simple monitoring.

### 3. After Reading All The IEEE Papers On Whatsapp Call Feature

After using an android to record, we got to the conclusion that technology is crucial to all facets. Whether it relates to WhatsApp voice call recording. According to one paper, the programme should be installed as It is simple to

accomplish that. Put your phone on speaker and use a different device to record a WhatsApp call. The third-party software must be downloaded from Google Play if the second phone lacks a recorder.

There are many call recording apps available in the Google Play Store if you want to record regular WhatsApp calls. Some of them function while others do not. After testing a number of them, we concluded that WhatsApp recording is among the top WhatsApp call recording apps available on the Google Play Store. It completes the task without any effort from you and offers a straightforward user interface. Your WhatsApp calls are automatically recorded by the programme, and you can also upload audio files to Google Drive. To ensure that nobody else can access the recording, you can establish fingerprints or a PIN. As a result, we can infer that the WhatsApp call is not logged by the cellular tower because these data are handled solely by WhatsApp.

#### DISADVANTAGES:

- Here we cannot categorize the data based on the particular locations .
- The Systems are time consuming and slow.
- Requires a lot of storage space.
- Cannot search based on a particular number.
- Night stay data cannot be found separately.

### III. PROPOSED SYSTEM

The project ensure to help in the process of crime investigation . It will make it easier to recognise the many pieces of information that a person would want throughout the course of the investigation, such as the maximum number of calls or the duration of the call with another caller and also this project contain the special module like filtering the number based on the location and the call type we gives result very quick.

### IV. SYSTEM ARCHITECTURE

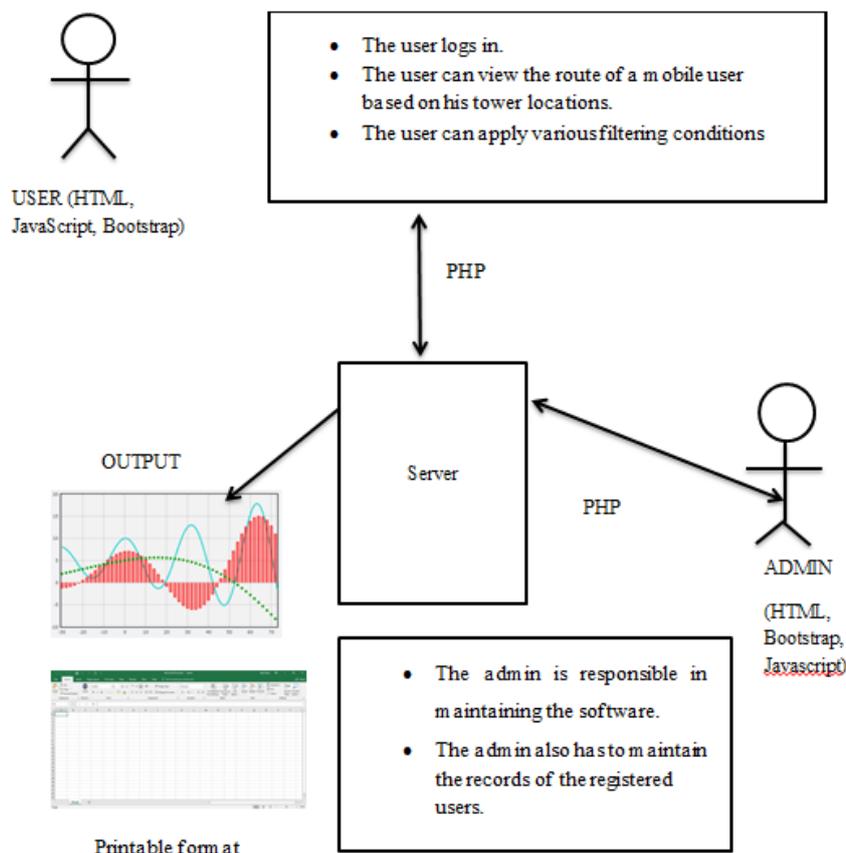


Fig. 1 Architecture of the System

**V. MODULES****1. Admin Module**

- The administrator must keep the programme updated and grant user authorization.
- The administrator must also keep track of all users who have registered.

**2. User Module**

- If the user is using the application for the first time, he must first log in or establish a new account.
- The CDR file may be uploaded by the user into the programme.
- Based on the phone user's recorded phone usage, the user can then try to comprehend the activities of the phone user.
- The user can also use different filtering techniques to get only specific types of information, and he can monitor the phone user based on where the tower is.

**VI. CONCLUSION**

A Call Detail Record (CDR) is a thorough log of every call made by phone exchange or other communication channel. Call Detail Records (CDR) are a crucial source of data, but they also have a lot of it, good data kinds, and a lot of data. However, in order to obtain this crucial data, CDR analysis is required. The analysis feature in CDR Analyzer has been made simpler for investigative purposes. Individuals (Users) must first log in. The File Containing CDR Dataset can then be downloaded by users from the Telecom firm. All the user has to do is click the selected button in order to apply any of the available filtering strategies on the uploaded data. Based on it, the database will be sorted. By looking at the caller tower's location in Google Maps, the user can also determine the caller's location. Additionally, he has access to results summaries for the submitted site.

**VII. FUTUTRE ENHANCEMENT**

- In the future, the suggested system might include sophisticated features" including the ability to use tracking tools to determine the user's precise location rather than simply a potential location.
- Additionally, without the assistance of any service providers or cellular carriers, making report generation on its own.

**REFERENCES**

1. "Data Mining Method use in Crime Investigation Network CDR Analysis" by Gajendra Kumar Vaikar, Prateema Gautam; Aisect University Bhopal. MAY 2020
2. "CDR Analysis using Big Data Technology" by Sara B. Elagib, Aisha-Hassan A. Hashim, R. F. Olanrewaju; International Islamic University Malaysia, Kuala Lumpur Malaysia. 2018
3. "Research on Google Map Algorithm and Implementation" by Jinhong Cui; School of Information Technology & Management Engineering, University of International Business and Economics, China , jan 2017
4. "Realtime Tracking Management System using GPS, GRPS and Google Earth" by Noppadol Chadil Apirak Russameesawang Phongsak Keeratiwintakorn; Department of Electrical Engineering, Faculty of Engineering, King Mongkut's University of Technology North Bangkok, Thailand.

**TEXT BOOKS**

1. "Database Management System", Dr .Rajiv Chopra , 5<sup>th</sup> Edition
2. " software testing ", paul c jagerson , Crafttsmen's edition, 2007
3. Object oriented modelling and design with UML", Michael R Blaha , Rumbaugh, 2<sup>nd</sup> edition, Pearson Edition, 2005
4. "software engineering ", K K Aggarwal and Yogesh sing, 3<sup>rd</sup> edition, 2008.