# ACTIVE RECORD ANALYTICS

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*Abstract*—Active Record is the M in MVC - the model - which is the layer of the system responsible for representing business data and logic. Active Record facilitates the creation and use of business objects whose data requires persistent storage to a database. It is an implementation of the Active Record pattern which itself is a description of an Object Relational Mapping system.

*Keywords*-authentication, orm, validations, rails, callbacks.

INTRODUCTION

Analytics is the discovery, interpretation, and communication of meaningful patterns in data. Especially valuable in areas rich with recorded information, analytics relies on the simultaneous application of statistics, computer programming and operations research to quantify performance. Analytics often favors data visualization to communicate insight. Organizations may apply analytics to business data to describe, predict, and improve business performance. 3Specifically, areas within analytics include predictive analytics, prescriptive analytics, enterprise decision management, retail analytics, store assortment and stock-keeping unit optimization, marketing optimization and marketing mix modeling, web analytics, sales force sizing and optimization, price and promotion modeling, predictive science, credit risk analysis, and fraud analytics. Since analytics can require extensive computation, the algorithms and software used for analytics harness the most current methods in computer science, statistics, and mathematics.

Redis is an open source, BSD licensed, advanced key-value store. It is often referred to as a data structure server, since the keys can contain strings, hashes, lists, sets and sorted sets. Redis is written in

Active Record - Model
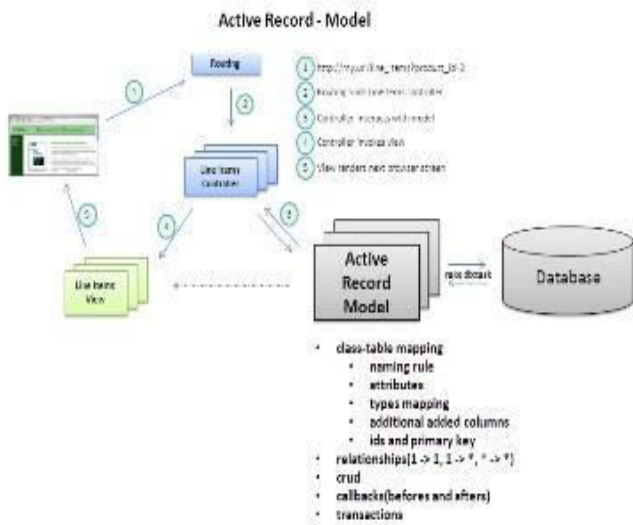
D3.js A JavaScript library for creating data visualization
–Transformation of data into interactive visualizations
– A kind of clever "jQuery for SVG

## I. OBJECTIVE

The main objective of our project is to provide a platform for users to do following:

- Track visits to website.
- Track events to website.
- Works with any DataBase.
- Can easily scale.

## II. ARCHITECTURE

Our project has following architecture:

## III. OBJECT RELATIONAL MAPPING

Object Relational Mapping, commonly referred to as its abbreviation ORM, is a technique that connects the rich objects of an application to tables in a relational database management system. Using ORM, the properties and relationships of the objects in an application can be easily stored and retrieved from a database without writing SQL statements directly and with less overall database access code.

Active Record gives us several mechanisms, the most important being the ability to:

- Represent models and their data.
- Represent associations between these models.
- Represent inheritance hierarchies through related models.
- Validate models before they get persisted to the database.
- Perform database operations in an object-oriented fashion

Rails Active Records provide an interface and binding between the tables in a relational database and the Ruby program code that manipulates

This tutorial provides good understanding on Redis concepts, needed to create and deploy a highly scalable and performance-oriented system. Redis is an open source, advanced key-value store and an apt solution for building highperformance, scalable web applications.

Redis has three main peculiarities that sets it apart.

- Redis holds its database entirely in the memory, using the disk only for persistence.

- Redis has a relatively rich set of data types when compared to many key-value data stores.

- Redis can replicate data to any number of slaves.

Highcharts is a pure JavaScript based charting library meant to enhance web applications by adding interactive charting capability. Highcharts provides wide variety of charts. For example, line charts, spline charts, area charts, bar charts, pie charts and so on.

database records. Ruby method names are automatically generated from the field names of database tables.

Each Active Record object has CRUD (Create, Read, Update, and Delete) methods for database access. This strategy allows simple designs and straight forward mappings between database tables and application objects.

## IV. FRAMEWORK

Ruby on Rails, or simply Rails, is a server-side web application framework written in Ruby under the MIT License. Rails is a model–view–controller (MVC) framework, providing default structures for a database, a web service, and web pages. It encourages and facilitates the use of web standards such as JSON or XML for data transfer, and HTML, CSS and JavaScript for display and user interfacing. In addition to MVC, Rails emphasizes the use of other well-known software engineering patterns and paradigms, including convention over configuration (CoC), don't repeat yourself (DRY), and the active record pattern

## V. CONCLUSION

This project allows user to store and visualize the data.

In this project we are providing the facilities for users to :
- Track and store data of application users.
- Analyze data
- Visual data representation

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