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# New Panvel (W)

PROJECT PROPOSAL ON

**“TRENDING VIDEO ANALYSIS USING DATAMINING TECHNIQUES”**

## By

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**CERTIFICATE**

This is to certify that the Project Proposal entitled

**“Trending video Analysis using Data mining techniques”**

Is successfully completed by **Rahul Baliram Patil**, Examination Seat Number under the guidance of **Prof. Ms.,** during the academic period of 10th June, 2017 to 28th Dec, 2017as per the Syllabus, and the fulfilment for the completion of the M.Sc.-II (Semester-III) in the Computer Science of **University of Mumbai**. It is also to certify that this is original work of the candidate done during academic year 2017-2018.

**Place:**

**Date:**

**Internal Examiner Head of Department**

**External Examiner**

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No project is ever completed without the guidance of those expert have already traded this past before and hence become and master of it and as a result, our leader. So I would like to take this opportunity to take all those individuals how have helped me in visualizing the project.

It is indeed a matter of great pleasure and proud privilege to be able to present this project proposal on “**Trending video Analysis using Datamining Techniques**”.

The completion of the project work is a milestone in student life and its execution is inevitable in the hands of guide. I express my deep gratitude to my project guide **Prof.**  for providing timely assist to my query and guidance that they give their experience in this field past many year. They had indeed been a lighthouse for us in this journey.

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**“TRENDING VIDEO ANALYSIS USING DATAMINING TECHNIQUES”**

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**INTRODUCTION**

Today’s world YouTube is most popular video sharing website. As a user YouTube generated large amount of content to the website. It hosts over five billion views a day. YouTube provide public statistic to upload videos, most notably the number of views, which shows the aggregate number of times a video has been watched up to that point. Naturally, the number of views for video indicates the level of popularity of that video; and it takes a varying amount of time for a video to become popular. Meanwhile, there are some videos are attract user’s attention in relatively short time. YouTube supports a feature that called trending, which use content that has the potential of becoming popular in relatively short time. Trending videos are usually not popular when declared as trending by YouTube; they have potential of becoming popular. For example, some video are labelled trending while having only few thousand in viewership of numbers. From another side, trending videos, YouTube tries to emerge trends developing within different viewership communities.

The general attribute of the viewership of trending videos have not been studied. To the best of our knowledge, basic statistics about YouTube trending video have not been studied, analyzed, or even received any kind attention. The fact that more than two billion unique user visit YouTube each month and they can upload 300 hours of video every minute YouTube is best place e.g. Marketing, advertising or brand engagement but genuinely it difficult and competitive to get attention of users. Therefore when video become popular, it exposed to millions of user for free and has opportunity of keeping their attention for a user. Finding these trends as significantly important that many different website have been emerged just to pickup latest trends on the web, such as “The Internet Archive”, “TED” or “whatTheTrend”. There are kind of websites “Vimeo” that tries to build the audience on YouTube of content owners or advertisers.

We can study based on collecting and monitoring high-resolution time-series of the viewership and related statistics of more than 8,000 YouTube videos over an aggregate period of nine month, To put this number into perspective, YouTube declares only tens of videos as trending on daily basis. This number is highly selective when compared to the thousands of videos uploaded on YouTube every minute. Basically trending video declared as just several hours after they are uploaded, so we are able to analyze trending video across their lifecycle; this provides invaluable insight into their viewership time-series over critical period of lifetime.

1. **Analysis of viewership lifecycle and basic statistics of trending-video content :** First, we analyzed and evaluated a variety of statistics of a comprehensive dataset about trending videos that we monitored over long time (more than two month) using YouTube data application programming interface (API). This dataset represent traditional statistics regarding content; this include number of views, number of comments, time duration of each video clip, category of video clip, and viewership statistics. Our initial objective was to answer basic questions about trending videos: What does lifecycle of trending-video viewership look like? How long does it take for trending video to become popular? What is the percentage of trending videos that do become popular? What are the categories and duration of trending videos?
2. **Analysis of the profile of trending video uploaders:** In addition of monitoring viewership statistics about the content, we also have the objective of gaining insight at other factors that might influence the reason why trending video is labelled. These factors might not be very obvious to a casual viewer. We conducted a comparative analysis between trending video uploaders profile and profile uploaders of recently uploaded video. We believe that comparative analysis sheds some light on some the factors that might be influencing the determination and popularity trending videos. Measuring, analyzing, and comparing key statistics regarding trending videos and uploaders

**RELATED WORK**

The aim of the research was to appraise and evaluate the implications of the E-Tendering process and assessits effectiveness within Construction of private or public or government sector.

Tendering is a method of entering into a sales contract.It is a long and complex business process and generates aseries of contractually related legal liabilities. Substantialconstruction and engineering contracts are entered into thetendering process. Parties involved in tendering are theprincipal, who runs the tendering, and the tenderer, sometimes called contractor, who makes offers to theprincipal. For e-tendering systems, a trusted third party mayhave to be introduced [4].

The construction industry is increasingly engulfed by globalisation where clients, business partnersand customers are found in virtually every corner of the world. Communicating, reaching and supporting them areno longer optional but are imperative for continued business growth and success. A key component of enterprisecommunication reach is collaborative environments (for the construction industry) which allows customers,suppliers, partners and other project team members secure access to project information, products or services theyneed at any given moment. Implementation of the stated critical success factors of the project is essential to ensureoptimal performance and benefits from the system to all parties involved. This paper presents critical success factorsfor the implementation of e-tendering in collaborative environments with particular considerations given to thepeople issues and process factors[5].

This study investigates the people and process critical success factors to successfully implement e-tendering in collaborative environments, with a specific focus on the construction industry (CI). Technology today is revolutionising businesses, transforming organisations and forcing changes to improve productivity. The results of this study show that the traditional construction tendering process did not change much in terms of people and process issues, through the introduction of e-tendering in a collaborative environment. In implementing e-tendering, perhaps the most important critical success factor is that all changes in the organisationmust be process-led, and not technology-led[5].

Information and Communication Technology plays dominant role in all business undertaken by the government. If allinteractions with government can be done through singlecounter 24x7, without waiting in lines at the leisure of house than it will be highly convenient to all citizens. This will not facilitate the government to avoid corruption and reach peopledirectly, it will additionally help government agencies in rising operational efficiencies, scale back project costs, and become citizen-friendly across a range of domains, that includes transport, municipal records, education, healthcare, ports and shipping, disaster management, crime and criminal tracking system, public distribution system and agriculture sector etc[6].

An inter relationship between e-Governance and Data Warehousing & Mining is presented in this paper. The introduction of DWDM in the area of ‘e-Governance’ strengthens the system. Initially few sectors need to be identified to incorporate the DWDM system. Once the desired response is achieved, the same can be implemented in other fields also. Once the full system is implemented at the national level, establishment of knowledge bank can play dominant role for whole ‘e-Governance’ environment [6].

Construction Industry plays a key role in the process of economictransformation and growth. Export of projects and services indicate a country's progress in technology and export performance. Most of the companies are versed only with engineering and technology. The decision to bid is a major financial decision because of two reasons. First, the contractorassumes substantial costs for the preparations of the estimatesand the tender at the risk of not recovering them if he is notawarded the job. Second, and most importantly, the contractor commits himself to investment in the construction of the project if he wins the bid [7].

The traditional systems of procurement in government departments through manual modes suffered from variousproblems such as inordinate delays in tender/order processing tendering systems should also include appropriate security mechanisms for increasing the system’s reliability which can be engulf by tendering process. From the deep study of the tendering and bidding process it may be concluded that private tender process is more accurate, time and cost saving over the traditional tender process. Political issues can be solved by adopting private tendering instead of traditional tendering [7].

**OBJECTIVE**

1. To optimise ConstructionIndustries Services and sales of Tender item that determines which TenderisDeliveredOver E-procurement using Association rule.
2. To Generate Frequent Itemset and Depth analysis of algorithms.
3. To examine leadership in facilitate the use of technology for design management and construction of building as well as civil construction project.
4. To Improve the resourcemanagement support that integrates the Contracts and increase the efficiency of constructionwhich reduces the overall cost with better outcomes with cost effective in public, private and government sector
5. To Demonstrate the benefits and efficiency through data mining techniques for wider project construction in industries as well as government sector
6. To Identify and evaluateconstruction capability, applicability, and level of the uptake within the contract.
7. To Determine the Quality of Service of Tender that Organization provides over the Period of time.
8. To examine the construction industry and government current state of Delay Service or Service Level concerning with E-tendering and assertion there barriers and enablers from both a technology and end user perspective.

**METHODOLOGY**

1. **FREQUENT ITEMSET USING DATAMINING**

Much research has been focused on finding efficient algorithm for mining large Itemset. In this work we will try to analyse the frequent Itemset using the algorithms of datamining like the Apriori algorithm, K-Apriori algorithm, and these algorithms are explained in detail below.

* 1. **APRIORI ALGORITHM**

Apriori [4] is an algorithm for frequent item set mining and association rule learning over transactional databases. It proceeds by identifying the frequent individual items in the database and extending them to larger and larger item sets as long as those item sets appear sufficiently often in the database. The frequent item sets determined by Apriori can be used to determine association rules which highlight general trends in the database: this has applications in domains such as market basket analysis.

Apriori algorithm for Frequent Itemset Mining

Cdn: Candidate itemset of size n

Ln: frequent itemset of size n

L1 = {frequent items};

For (n=1; Ln!= ; n++)

Do begin

Cdn+1 = candidates generated from Ln;

For each transaction T in database do

Increment the count of all candidates in Cdn+1 that are

contained in T

Ln+1= candidates in Cdn+1 with min\_support

End

Return Ln

1. **CLASSIFICATION**

In [classification](https://en.wikipedia.org/wiki/Statistical_classification), inputs are divided into two or more classes, and the learner must produce a model that assigns unseen inputs to one or more ([multi-label classification](https://en.wikipedia.org/wiki/Multi-label_classification)) of these classes. This is typically tackled in a supervised way.

Classification is used to classify each item in a set of data into one of predefined set of classes or groups. The data analysis task classification is where a model or classifier is constructed to predict categorical labels (the class label attributes). Classification is a data mining function that assigns items in a collection to target categories or classes. The goal of classification is to accurately predict the target class for each case in the data.

Classification is a model finding process that is used for partioning the data into different classes according to some constrains. In other words we can say that classification is process of generalizing the data according to different instances. Several major kinds of classification algorithms including C4.5, k-nearest neighbor classifier, Naive Bayes, SVM, Apriori, and AdaBoost, etc.

**Our** Analysis determines the Optimal Resource Organization to facilitate the Construction Services for Different Area or Sector including public and private or government for identification and evaluation of construction capability, applicability, and level of the uptake within the contract.

1. **CLUSTERING**

Clustering is the grouping of a particular set of objects based on their characteristics, aggregating them according to their similarities. Regarding to data mining, this methodology partitions the data implementing a specific join algorithm, most suitable for the desired information analysis of E-Tendering.

The personal data combined with shopping, location, interest, actions and an infinite number of indicators, can be analysed with this methodology, providing very important information and trends. Examples of this are the market research, marketing strategies, web analytics, and a lot of others.

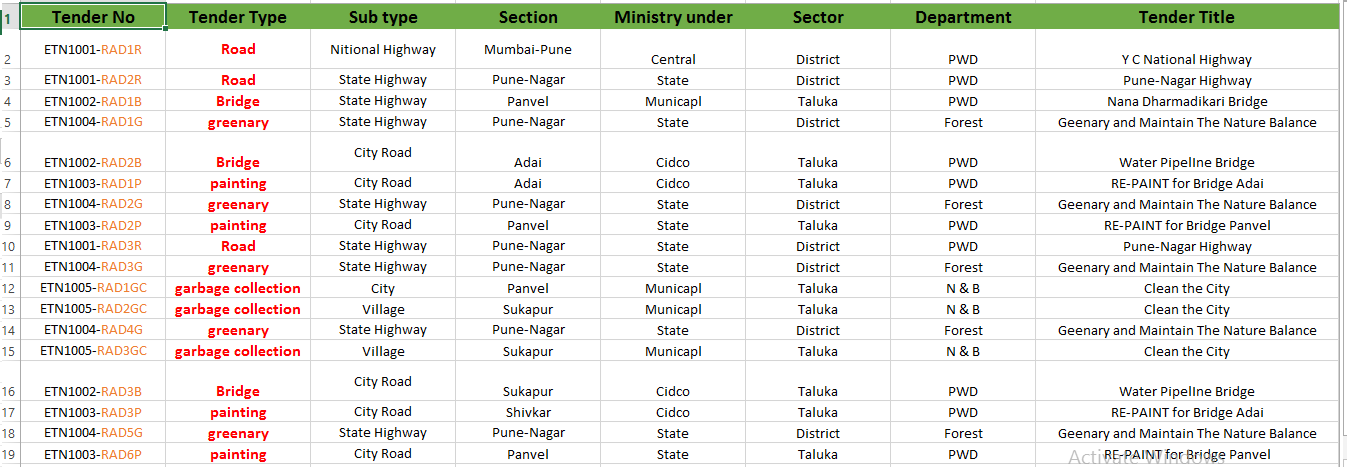
**3.1 K-means Clustering**

K-means is an iterative clustering algorithm in which items are moved among setsof clusters until the desired set is reached. This technique is used to classify thedata which have no previous knowledge about the data or the training set. Theparameter K denotes the amount of clusters required to partition the data. The ideaof this clustering technique is, given K number of clusters we can define Kcentres, one for each cluster based on all samples belonging to a cluster. Thesecentres must be placed far away from each other and then associate each sampleto the cluster that has the closest centroid.

**In our**E-Tendering Analysis**K-means Clustering**can be usedtoexamine the Organizations that provide Constructions Services in Particular area that enables in Public or Government Section Tenders of Construction Service.

1. **DATASET:**

The dataset used for this work can make us understand the algorithms more clearly.

The effects algorithm can be understood in much depth

1. **SYSTEM CONFIGURATION**

**H/W System Configuration:**

* System - Core-2-Due 2.4Ghz
* Speed - 2.4Ghz
* RAM - 4GB
* Hard Disk - 500GB
* Keyboard - Standard Windows Keyboard(Neosoft)
* Mouse - Standard Intex
* Monitor - 19” LED

**S/W System Configuration:**

* Operating system - Win 10
* Database - MySql/Excel
* Language - R/Weka/Python

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