

Ontology of Indian online Matrimonial Information system and social services

Mamta, Monika Saxena

Department of Computer Science, Banasthali University, Rajasthan.

Corresponding author: Mamta, Email: mamta07_gupta07@yahoo.com

Indian online matrimony is a new medium and gaining popularity day by day to finding soul mate, despite traditional approach of marriages virtual space exhibit new aspects of media usage and selection of spouse. Belief related to love, role of gender and marriage are gingerly alter with adoption of new social realities and life. Technological advancement and continuous development of ecommerce has given rise to various virtual portals including matrimony. They are accelerating the development of matrimony in virtual space. Global media and technological advancement have opened up a new world of possibilities. Technology is giving new method to share, express and to fulfill the need of searching soul mate. Gradually they are replacing the role of culture and societies to find perfect match. Online matchmaking methods have altered the way marriages happen in India. Online matrimony is replacing the long Indian time consuming traditional process of marriages. Ontology is a concept that helps matrimonial organization to maintain their data of millions of registered users in systematic manner. Aim of this paper is to give a new approach to matrimonial organization to manage their large size data effectively with well-formed structure.

Keywords: Indian matchmaking, Online matrimonial, Ontology, Social services.

1 Introduction

India is a second largest country in terms of population. It consists of 28 states and 8 union territories. It is a secular democratic country with great diversity which is incomparable to any other civilization of the world .India is very rich in terms of culture it has twenty religions all are different to each other like Hinduism, Sikhism, Islam, Jainism and Christianity. Though all are different in culture, customs, rituals and languages but they pride themselves on being unlike members of country [13].

Marriages in India are treated differently as compared to west. In west it depends on individual choice but in India it is a union of two families. Wedding in India is a long process of negotiations between two families including cousins, uncles and aunts. Arrange marriages in India are collective efforts of families they rarely depends on individual choice. In contrast, the western belief of marriages labeled as love marriages are more depends on individual choice rather than family. Gradually Indian societies are facing social changes due to continuous impact of western culture from movies, TV shows and books. Families are facing difficulties to find suitable soul mate for their children due to globalization, broken of family grids and decline in the influence of extended joint family. These are the reasons for advent of matchmaking services [5].

For centuries, Indian families are taking help from relatives, marriage mediators and more recently from newspaper ads to marry off their children .To marry their sons and daughter they have to depend on their relatives and caste networks. But global media and technological advancement have opened up a new world of possibilities to share, express and to fulfill the need of searching spouse. The first Indian matrimonial website was appeared on internet in late 1990s and after that number of users has registered and many matrimonial websites like Bharat, Shaadi.com, jeevansathi.com and vivah.com etc., have come online [2].

2 Ontology for Matrimonial Information Systems

The ontology is basically used to share Data/information between applications & people. In this procedure data is captured and represented in the form of knowledge so that machine and peoples can understand each other's requirements. Using ontology procedure the knowledge requirement is represented. The form of ontology in information system is logic, AI, Machine learning and philosophy. People, Software, Hardware, Networks and Data are the main components of any Information Systems. Figure 1 is showing the main components of Matrimonial Information System.



Figure 1. Components of M-IS [16].

Due to Indian population and many internet users, online matrimony is an emerging market. Due to increasing marriageable educated population, increasing mobility of younger professionals and breaking of traditional family networks people are searching their spouse online. Today's youth are open minded and they want more control in choosing their life partner and they are ready to adopt technologies to choose their life partner as they want. In India online matrimony is growing and very popular day by day because of free registration, multiple profile recommendation day by day, detailed profile show everything like eating habits, blood group, education, salary, height, photographs etc. Due to lack of time and technological advancement people are now prefer online matrimony [1]. Advent of fast internet in fast moving era and development of ecommerce has led to emergence of online matrimony. E-commerce in India is growing consistently with field of online matrimony from last few years. Online matrimony portals have altered the way marriages happen in India. Online matrimony is replacing the long Indian time consuming traditional process of marriages. Aim of this paper is to study the existing articles related to online matrimonial and identify the research gap.

3 Literature Review

The following are the studied and reviewed papers regarding ontology of M-IS.

Somasundaram [1] discussed that how Online Matrimonial service deals the complex traditional process of fixing marriage effectively. Author discussed about the growth factors of Indian online matrimonial portals like Indian population and having third largest set of internet users, having second largest set of mobile phone internet users and Distinguishable (treating different customers differently) factors. Author also discussed that online matrimony is an emerging market due to increasing marriageable educated population, increasing mobility of younger professionals, breaking of traditional family networks. Today's youth are open minded and they want more control in choosing their life partner and they are ready to adopt technologies to choose their life partner as they want. Author also discussed that how India is trying to narrow down the digital division between rural and urban area and. Author discussed about those factors which are the reasons for popularity like free registration, multiple profile recommendation day by day, detailed profile show everything like eating habits, blood group, education, salary, height, photographs etc.

Titzmann [2] discussed that Indian online matrimony is a new medium and gaining popularity day by day to finding soul mate, despite traditional approach of marriages virtual space exhibit new aspects of media usage and selection of spouse. Belief related to love, role of gender and marriage are gingerly alter with adoption of new social realities and life. Author discussed the impact of physical, social and media motilities in marriage and women.

Pal [3] examines the capabilities and potentialities of four online matrimony service providers (shaadi, bharat matrimony, jeevansathi and simplyMarry.com) in India. Using web matrices author did comparison among this portal. With the help of traffic rank trend author shows that shaadi.com is more popular than other. Author has given the rank list of various Indian online matrimony service providers. The online matrimony is a new method to share, express and to fulfill the need of searching spouse.

Paramita [4] in this study author took the interview with eight female of different ages and culture and from interview he analyzed that the role of technology in searching soul mate is increasing day by day. He analyzed tinder web application and he discussed that social media application are new method to share and express and to fulfill the need of searching soul mate. Gradually they are replacing the role of culture and societies to find perfect match.

Seth [5] author conducted his study in Delhi and Mumbai. He discussed the effects of online matrimonial sites on process of arranged marriages in India. online matrimony gives the facility of

virtual dating before formation of relationships. Online matrimony provides easy access of information related to religion, caste, language and community. Now Women comfortably can also participate in the marriages process by using technologies .Emails and instant messages gives the ability for direct communication in online matrimony ,you can search rich set of data according to your match.

Krishna [6] author discussed the influence of search, convenience, trust and features of websites on level of customer satisfaction. For this he used structural equation modeling techniques. He also discussed that for increasing users website need to be simple, easy and convenient and to increase customer satisfaction they need to focus on personalized search ,privacy policy and giving more profiles significantly increasing the level of customer satisfaction.

Iyer [7] author discussed that online matrimony will be taken as an essential source to find spouse by improving searching algorithm ,targeting segment based on age and level of education , providing faster result and by making sentiment of one community among the users of online matrimony portals

Rajanikanth [8] author discussed that searching a match through the traditional way like priest or relatives is becoming difficult due to change in life style, technology developments and lack of time mostly younger people are preferring online matrimonial sites for receiving and sending CVs and photos. These are the reasons for popularity and growth of matrimony business in India. Author also discussed that privacy and trustworthiness are the major factor that people looking in online matrimonial site.

Geeta [9] author discussed the benefit of big data and how it will help to identify fraud from data available in database and activity logs. Author presented some types of fraud like same multiple profiles and profile with lots of negativities etc. that are encountered in matrimonial services.

Carter [10] author discussed the impact of online matching on both selection of soul mate and eminence of relationships. Author compares the similarity level of Couples, who married through online matchmaking system and who married through unconstrained methods. For this author collected the data from married couples who met through the system and who met through the unconstrained methods. After analysis he found that couples who met through the system are more interconnected and similar than couples who met through the unconstrained methods.

Joshi [11] author proposed a method in which he used Gale Shapley stable matching algorithm and FAHP for desired spouse selection. Method will increase the chances of getting desired response. Method will reduce the effort of customer to search their partner virtually based on their implicit needs (not directly stated).

Kharde [12] author proposed a matrimonial web application that provides grooms and brides. It will give functionality of search according to criteria .It will alert you on mail for match .It will allow you to change preferences for spouse .Application will allow you to edit or hide the profile. You can create album. You can send interest or personal message to the other user.

Meenornngwar [14] author has given an ontological approach to represent, store and describe complex data that can be change. Author has developed a tool called LiMe to capture the knowledge from text of large size .Purpose of this research is to capture the data from large size text content and represent it in form of knowledge.

Vysotska [15] author has given an intelligent system for categorization and analysis of text of large size based on ontological approach. Manual analysis of text content is a time consuming process. With the help of this ontological approach users can easily filter and search their text content.

As demonstrated in Table 1, almost all of the studies are talking about popularity, technology, capabilities, potentialities and growth level of online matchmaking sites. But no one is talking about that

how to manage the huge information of online matchmaking sites. Present study proposing an ontological approach to manage matrimonial information effectively in systematic manner.

Table 1. Studies related to online matrimonial websites

| Author | Purpose of study |
|------------------|--|
| Somasundaram [1] | Discussing the growth factor and popularity of online matrimony |
| Titzmann [2] | Discussed the popularity and impact of social media. |
| Pal [3] | Examines the capabilities and potentialities of matrimonial websites |
| Paramita [4] | Discussed how technology replace the role of human to find perfect match |
| Seth [5] | Discussed the easiness to finding perfect match |
| Krishna [6] | Discussed the customer satisfaction factor |
| Iyer [7] | Discussed some factors to improve online services |
| Rajanikanth [8]. | Discussed the popularity and growth |
| Geeta [9] | Discussed about the frauds and how to identify the frauds |
| Carter [10] | Compare the traditional process and online |
| Joshi [11] | Developed an algorithm for spouse selection |
| Kharde [12] | Developed a matrimonial web application |

4 Research Motivation

Matrimonial Information systems (M-IS) need ontology because by using this understanding requirement and knowledge is fulfilled. To get better requirement parameters here we can apply computational logics and machine learning. Basically it is based on context-aware information retrieval. If we compare user requirements of their partner search then it is easily captured using ontology. The following are the features of using ontology based requirement parameters in online matrimonial services:

1. **Technological advances:** Previously the data/information systems are containing relational data bases but now a day we are using the concept of machine learning and ontology, which is easy way to visualize, model and represent information. So by using this it is easy to keep track on user requirements.
2. **Recent market trends of M-IS:** Previously market was depended on lot of information but now a day the market and users require context-based solution. The context-based information is easy to store and analytics.
3. **Flexibility:** Now a day M-IS are more flexible, it changes the requirements immediately as per user's requirement.

5 Proposed Methodology

The proposed ontology for online matrimonial Information Systems is divided in five phases as listed below:

- Phase 1: Analyze the scope of the domain.
- Phase 2: Analyze the targeted users and there functional requirements.
- Phase 3: Analyze and choose for Physical or Logical ontology architecture.
- Phase 4: Analyze & choose M-IS development approach, representation and knowledge acquisition methods and tools.
- Phase 5: Evaluate and verify the M-IS domain ontology.

6 Conclusion

Indian Online matrimony is a new medium for searching spouse .It is gaining huge popularity day by day from late 1990s in Indian marriage market .They have a database of millions of registered users . In India online matrimony is growing and very popular day by day but there are not many articles available in the academic literature on them. This paper also show this imbalance .Various studies as stated above all are talking about features, popularity of online matrimony. Ontological approach will help organization to manage data of millions of registered users of matrimonial. With the help of ontological approach organization can store, describe and represent their matrimonial information effectively in systematic manner.

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