

INTERNATIONAL JOURNAL OF RESEARCH IN COMPUTER APPLICATION & MANAGEMENT

I
J
R
C
M



A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories

Indexed & Listed at:

Ulrich's Periodicals Directory ©, ProQuest, U.S.A., EBSCO Publishing, U.S.A., Cabell's Directories of Publishing Opportunities, U.S.A.

as well as in Open J-Gate, India (link of the same is duly available at Infibnet of University Grants Commission (U.G.C.))

Registered & Listed at: Index Copernicus Publishers Panel, Poland

Circulated all over the world & Google has verified that scholars of more than 1388 Cities in 138 countries/territories are visiting our journal on regular basis.

Ground Floor, Building No. 1041-C-1, Devi Bhawan Bazar, JAGADHRI – 135 003, Yamunanagar, Haryana, INDIA

www.ijrcm.org.in

CONTENTS

Sr. No.	TITLE & NAME OF THE AUTHOR (S)	Page No.
1.	PRICE EFFECT IN DHAKA STOCK EXCHANGE OF CROSS-LISTING IN CHITTAGONG STOCK EXCHANGE <i>MD. RAFIQU L MATIN & DR. JAWAD R ZAHID</i>	1
2.	STUDY OF SHOPPER'S ATTITUDE TOWARDS PRIVATE LABELS IN DUBAI <i>DR. TANMAY PANDA & K. TEJA PRIYANKA YADAV</i>	8
3.	FACTORS INFLUENCING INDIVIDUAL INTRANET USAGE: A LITERATURE REVIEW <i>MOHAMAD NOORMAN MASREK, DANG MERDUWATI HASHIM & MOHD SHARIF MOHD SAAD</i>	15
4.	THE BRANDING OF A COUNTRY AND THE NIGERIAN BRAND PROJECT <i>DR. ANTHONY .A. IJEWERE & E.C. GBANDI</i>	21
5.	THE RELATIONSHIP BETWEEN THE INTERNAL AUDIT FUNCTION AND CORPORATE GOVERNANCE: EVIDENCE FROM JORDAN <i>DR.YUSUF ALI KHALAF AL-HROOT</i>	27
6.	PROPOSED FRAMEWORK FOR IMPROVING THE PAYMENT SYSTEM IN GHANA USING MOBILE MONEY <i>MENSAH KWABENA PATRICK, DAVID SANKA LAAR & ALIRAH MICHAEL ADALIWEI</i>	33
7.	A COMPARATIVE STUDY ON PUBLIC SECTOR BANKS (VS) PRIVATE SECTOR BANKS (A CASE STUDY ON STATE BANK OF INDIA, CANARA BANK VS CITY BANK, ICICI BANK) <i>V. SRI HARI, DR. B. G SATYA PRASAD, VIKAS JAIN & DR. D. L. SREENIVAS.</i>	40
8.	DATA MINING APPLICATION IN TRANSPORT SECTOR WITH SPECIAL REFERENCE TO THE ROAD ACCIDENTS IN KERALA <i>DR. JOHN T. ABRAHAM & SWAPNA K. CHERIAN</i>	48
9.	RURAL MARKETS-A NEW FORCE FOR MODERN INDIA <i>RICHARD REMEDIOS</i>	51
10.	ASSESSMENT OF TRAINING NEEDS AND EVALUATION OF TRAINING EFFECTIVENESS IN EMPLOYEES OF SELECT ITes COMPANIES AT BANGALORE <i>DR. ANITHA H. S. & SOWMYA K. R.</i>	54
11.	JOB HOPPING AND EMPLOYEE TURNOVER IN THE TELECOM INDUSTRY IN THE STATE OF TAMIL NADU <i>L.R.K. KRISHNAN & DR. SETHURAMASUBBIAH</i>	59
12.	GROWTH AND RESPONSE OF AGRICULTURE TO TECHNOLOGY AND INVESTMENT IN INDIA (A STUDY OF POST GLOBALIZATION PERIOD) <i>SONALI JAIN, H.S. YADAV & TANIMA DUTTA</i>	80
13.	DAY OF THE WEEK EFFECT IN INTERNATIONAL MARKET: A CASE STUDY OF AMERICAN STOCK MARKET <i>DR. BAL KRISHAN & DR. REKHA GUPTA</i>	86
14.	STOCHASTIC BEHAVIOR OF A TWO UNIT SYSTEM WITH PARTIAL FAILURE AND FAULT DETECTION <i>VIKAS SHARMA, J P SINGH JOOREL, ANKUSH BHARTI & RAKESH CHIB</i>	90
15.	SURVEY OF NEWRENO AND SACK TCP TECHNIQUES PERFORMANCE IN PRESENCE OF ERRORS FOR HIGH SPEED NETWORK <i>MARGAM K.SUTHAR & ROHIT B. PATEL</i>	98
16.	A STUDY OF INDIAN BANKS WITH REFERENCE TO SERVICE QUALITY ATTRIBUTES AND CUSTOMER SATISFACTION <i>DR. ASHWIN G. MODI & KUNDAN M PATEL</i>	103
17.	PREDICTING CONSUMER BUYING BEHAVIOR USING A DATA MINING TECHNIQUE <i>ARATHI CHITLA</i>	108
18.	PERFORMANCE ANALYSIS OF VALUE STOCKS & EVIDENCE OF VALUE PREMIUM: A STUDY ON INDIAN EQUITY MARKET <i>RUBEENA BAJWA & DR. RAMESH CHANDER DALAL</i>	113
19.	STAR RATING FOR INDIAN BANKS WITH RESPECT TO CUSTOMER SERVICE <i>DR. M. S. JOHN XAVIER</i>	119
20.	ROUTING OF VLSI CIRCUITS USING ANT COLONY OPTIMISATION <i>A.R.RAMAKRISHNAN & V. RAJKUMAR</i>	123
21.	A STUDY ON INVESTORS' CONSCIOUSNESS AND INVESTMENT HABITS TOWARD MUTUAL FUNDS: - AN EXPLORATORY STUDY OF MEHSANA DISTRICT <i>ATUL PATEL, H. D. PAWAR & JAYSHRI DATTA</i>	127
22.	THE JIGSAW CAPTCHA <i>BALJIT SINGH SAINI</i>	134
23.	STUDY OF THE AWARENESS ABOUT THE SERVICES OFFERED BY THE DEPOSITORY PARTICIPANTS IN RAJASTHAN <i>DR. DHIRAJ JAIN & PREKSHA MEHTA</i>	137
24.	ATTACHMENT BETWEEN STOCK INDICES FII, NSE AND BSE <i>P. KRISHNAVENI</i>	142
25.	UTILIZATION OF E-BANKING SERVICES BY THE CUSTOMERS OF ICICI BANK LIMITED <i>M. S. ANANTHI & DR. L. P. RAMALINGAM</i>	146
26.	A SYSTEM FOR EMBEDDING FIVE TYPES OF EMOTIONS IN SPEECH: USING TIME DOMAIN PITCH SYNCHRONIZATION OVERLAP AND ADD (TPSOLA) <i>MAMTA SHARMA & MADHU BALA</i>	153
27.	PERFORMANCE OF INDIAN SCHEDULED COMMERCIAL BANKS IN PRE AND POST GLOBAL CRISIS <i>PRABINA KUMAR PADHI & MADHUSMITA MISHRA</i>	159
28.	FOOD PROCESSING INDUSTRY: INDIA NEED FOR DOMINATING GLOBAL MARKETS <i>ALI LAGZI & R.THIMMARAYAPPA</i>	162
29.	ROLE OF BALANCED SCORECARD AS A COMMUNICATION TOOL <i>ANSHU</i>	167
30.	PERFORMANCE APPRAISAL OF INDIAN BANKING SECTOR: A COMPARATIVE STUDY OF SELECTED PRIVATE AND FOREIGN BANKS <i>SAHILA CHAUDHRY</i>	171
	REQUEST FOR FEEDBACK	181

CHIEF PATRON

PROF. K. K. AGGARWAL

Chancellor, Lingaya's University, Delhi
Founder Vice-Chancellor, GuruGobindSinghIndraprasthaUniversity, Delhi
Ex. Pro Vice-Chancellor, GuruJambheshwarUniversity, Hisar

PATRON

SH. RAM BHAJAN AGGARWAL

Ex.State Minister for Home & Tourism, Government of Haryana
Vice-President, Dadri Education Society, Charkhi Dadri
President, Chinar Syntex Ltd. (Textile Mills), Bhiwani

CO-ORDINATOR

MOHITA

Faculty, Yamuna Institute of Engineering & Technology, Village Gadhola, P. O. Gadhola, Yamunanagar

ADVISORS

DR. PRIYA RANJAN TRIVEDI

Chancellor, The Global Open University, Nagaland

PROF. M. S. SENAM RAJU

Director A. C. D., School of Management Studies, I.G.N.O.U., New Delhi

PROF. S. L. MAHANDRU

Principal (Retd.), MaharajaAgrasenCollege, Jagadhri

EDITOR

PROF. R. K. SHARMA

Professor, Bharti Vidyapeeth University Institute of Management & Research, New Delhi

CO-EDITOR

MOHITA

Faculty, Yamuna Institute of Engineering & Technology, Village Gadhola, P. O. Gadhola, Yamunanagar

EDITORIAL ADVISORY BOARD

DR. RAJESH MODI

Faculty, YanbuIndustrialCollege, Kingdom of Saudi Arabia

PROF. PARVEEN KUMAR

Director, M.C.A., Meerut Institute of Engineering & Technology, Meerut, U. P.

PROF. H. R. SHARMA

Director, Chhatarpati Shivaji Institute of Technology, Durg, C.G.

PROF. MANOHAR LAL

Director & Chairman, School of Information & Computer Sciences, I.G.N.O.U., New Delhi

PROF. ANIL K. SAINI

Chairperson (CRC), GuruGobindSingh. P. University, Delhi

PROF. R. K. CHOUDHARY

Director, Asia Pacific Institute of Information Technology, Panipat

DR. ASHWANI KUSH

Head, Computer Science, UniversityCollege, KurukshetraUniversity, Kurukshetra

DR. BHARAT BHUSHAN

Head, Department of Computer Science & Applications, GuruNanakKhalsaCollege, Yamunanagar

DR. VIJAYPAL SINGH DHAKA

Dean (Academics), Rajasthan Institute of Engineering & Technology, Jaipur

DR. SAMBHAVNA

Faculty, I.I.T.M., Delhi

DR. MOHINDER CHAND

Associate Professor, KurukshetraUniversity, Kurukshetra

DR. MOHENDER KUMAR GUPTA

Associate Professor, P.J.L.N.GovernmentCollege, Faridabad

DR. SAMBHAV GARG

Faculty, M. M. Institute of Management, MaharishiMarkandeshwarUniversity, Mullana

DR. SHIVAKUMAR DEENE

Asst. Professor, Dept. of Commerce, School of Business Studies, Central University of Karnataka, Gulbarga

DR. BHAVET

Faculty, M. M. Institute of Management, MaharishiMarkandeshwarUniversity, Mullana

ASSOCIATE EDITORS

PROF. ABHAY BANSAL

Head, Department of Information Technology, Amity School of Engineering & Technology, Amity University, Noida

PROF. NAWAB ALI KHAN

Department of Commerce, AligarhMuslimUniversity, Aligarh, U.P.

DR. ASHOK KUMAR

Head, Department of Electronics, D. A. V. College (Lahore), AmbalaCity

ASHISH CHOPRA

Sr. Lecturer, Doon Valley Institute of Engineering & Technology, Karnal

SAKET BHARDWAJ

Lecturer, HaryanaEngineeringCollege, Jagadhri

TECHNICAL ADVISORS

AMITA

Faculty, Government M. S., Mohali

MOHITA

Faculty, Yamuna Institute of Engineering & Technology, Village Gadholi, P. O. Gadholi, Yamunanagar

FINANCIAL ADVISORS

DICKIN GOYAL

Advocate & Tax Adviser, Panchkula

NEENA

Investment Consultant, Chambaghat, Solan, Himachal Pradesh

LEGAL ADVISORS

JITENDER S. CHAHAL

Advocate, Punjab & Haryana High Court, Chandigarh U.T.

CHANDER BHUSHAN SHARMA

Advocate & Consultant, District Courts, Yamunanagar at Jagadhri

SUPERINTENDENT

SURENDER KUMAR POONIA

CALL FOR MANUSCRIPTS

We invite unpublished novel, original, empirical and high quality research work pertaining to recent developments & practices in the area of Computer, Business, Finance, Marketing, Human Resource Management, General Management, Banking, Insurance, Corporate Governance and emerging paradigms in allied subjects like Accounting Education; Accounting Information Systems; Accounting Theory & Practice; Auditing; Behavioral Accounting; Behavioral Economics; Corporate Finance; Cost Accounting; Econometrics; Economic Development; Economic History; Financial Institutions & Markets; Financial Services; Fiscal Policy; Government & Non Profit Accounting; Industrial Organization; International Economics & Trade; International Finance; Macro Economics; Micro Economics; Monetary Policy; Portfolio & Security Analysis; Public Policy Economics; Real Estate; Regional Economics; Tax Accounting; Advertising & Promotion Management; Business Education; Management Information Systems (MIS); Business Law, Public Responsibility & Ethics; Communication; Direct Marketing; E-Commerce; Global Business; Health Care Administration; Labor Relations & Human Resource Management; Marketing Research; Marketing Theory & Applications; Non-Profit Organizations; Office Administration/Management; Operations Research/Statistics; Organizational Behavior & Theory; Organizational Development; Production/Operations; Public Administration; Purchasing/Materials Management; Retailing; Sales/Selling; Services; Small Business Entrepreneurship; Strategic Management Policy; Technology/Innovation; Tourism, Hospitality & Leisure; Transportation/Physical Distribution; Algorithms; Artificial Intelligence; Compilers & Translation; Computer Aided Design (CAD); Computer Aided Manufacturing; Computer Graphics; Computer Organization & Architecture; Database Structures & Systems; Digital Logic; Discrete Structures; Internet; Management Information Systems; Modeling & Simulation; Multimedia; Neural Systems/Neural Networks; Numerical Analysis/Scientific Computing; Object Oriented Programming; Operating Systems; Programming Languages; Robotics; Symbolic & Formal Logic and Web Design. The above mentioned tracks are only indicative, and not exhaustive.

Anybody can submit the soft copy of his/her manuscript **anytime** in M.S. Word format after preparing the same as per our submission guidelines duly available on our website under the heading guidelines for submission, at the email addresses: infoijrcm@gmail.com or info@ijrcm.org.in.

GUIDELINES FOR SUBMISSION OF MANUSCRIPT

1. **COVERING LETTER FOR SUBMISSION:**

DATED: _____

THE EDITOR
IJRCM

Subject: SUBMISSION OF MANUSCRIPT IN THE AREA OF

(e.g. Finance/Marketing/HRM/General Management/Economics/Psychology/Law/Computer/IT/Engineering/Mathematics/other, please specify)

DEAR SIR/MADAM

Please find my submission of manuscript entitled ' _____ ' for possible publication in your journals.

I hereby affirm that the contents of this manuscript are original. Furthermore, it has neither been published elsewhere in any language fully or partly, nor is it under review for publication elsewhere.

I affirm that all the author (s) have seen and agreed to the submitted version of the manuscript and their inclusion of name (s) as co-author (s).

Also, if my/our manuscript is accepted, I/We agree to comply with the formalities as given on the website of the journal & you are free to publish our contribution in any of your journals.

NAME OF CORRESPONDING AUTHOR:

Designation:

Affiliation with full address, contact numbers & Pin Code:

Residential address with Pin Code:

Mobile Number (s):

Landline Number (s):

E-mail Address:

Alternate E-mail Address:

NOTES:

- a) The whole manuscript is required to be in **ONE MS WORD FILE** only (pdf. version is liable to be rejected without any consideration), which will start from the covering letter, inside the manuscript.
- b) The sender is required to mention the following in the **SUBJECT COLUMN** of the mail:
New Manuscript for Review in the area of (Finance/Marketing/HRM/General Management/Economics/Psychology/Law/Computer/IT/Engineering/Mathematics/other, please specify)
- c) There is no need to give any text in the body of mail, except the cases where the author wishes to give any specific message w.r.t. to the manuscript.
- d) The total size of the file containing the manuscript is required to be below **500 KB**.
- e) Abstract alone will not be considered for review, and the author is required to submit the complete manuscript in the first instance.
- f) The journal gives acknowledgement w.r.t. the receipt of every email and in case of non-receipt of acknowledgment from the journal, w.r.t. the submission of manuscript, within two days of submission, the corresponding author is required to demand for the same by sending separate mail to the journal.

2. **MANUSCRIPT TITLE:** The title of the paper should be in a 12 point Calibri Font. It should be bold typed, centered and fully capitalised.

3. **AUTHOR NAME (S) & AFFILIATIONS:** The author (s) **full name, designation, affiliation (s), address, mobile/landline numbers**, and **email/alternate email address** should be in italic & 11-point Calibri Font. It must be centered underneath the title.

4. **ABSTRACT:** Abstract should be in fully italicized text, not exceeding 250 words. The abstract must be informative and explain the background, aims, methods, results & conclusion in a single para. Abbreviations must be mentioned in full.

5. **KEYWORDS:** Abstract must be followed by a list of keywords, subject to the maximum of five. These should be arranged in alphabetic order separated by commas and full stops at the end.
6. **MANUSCRIPT:** Manuscript must be in **BRITISH ENGLISH** prepared on a standard A4 size **PORTRAIT SETTING PAPER**. It must be prepared on a single space and single column with 1" margin set for top, bottom, left and right. It should be typed in 8 point Calibri Font with page numbers at the bottom and centre of every page. It should be free from grammatical, spelling and punctuation errors and must be thoroughly edited.
7. **HEADINGS:** All the headings should be in a 10 point Calibri Font. These must be bold-faced, aligned left and fully capitalised. Leave a blank line before each heading.
8. **SUB-HEADINGS:** All the sub-headings should be in a 8 point Calibri Font. These must be bold-faced, aligned left and fully capitalised.
9. **MAIN TEXT:** The main text should follow the following sequence:

INTRODUCTION**REVIEW OF LITERATURE****NEED/IMPORTANCE OF THE STUDY****STATEMENT OF THE PROBLEM****OBJECTIVES****HYPOTHESES****RESEARCH METHODOLOGY****RESULTS & DISCUSSION****FINDINGS****RECOMMENDATIONS/SUGGESTIONS****CONCLUSIONS****SCOPE FOR FURTHER RESEARCH****ACKNOWLEDGMENTS****REFERENCES****APPENDIX/ANNEXURE**

It should be in a 8 point Calibri Font, single spaced and justified. The manuscript should preferably not exceed **5000 WORDS**.

10. **FIGURES & TABLES:** These should be simple, crystal clear, centered, separately numbered & self explained, and **titles must be above the table/figure. Sources of data should be mentioned below the table/figure.** It should be ensured that the tables/figures are referred to from the main text.
11. **EQUATIONS:** These should be consecutively numbered in parentheses, horizontally centered with equation number placed at the right.
12. **REFERENCES:** The list of all references should be alphabetically arranged. The author (s) should mention only the actually utilised references in the preparation of manuscript and they are supposed to follow **Harvard Style of Referencing**. The author (s) are supposed to follow the references as per the following:
 - All works cited in the text (including sources for tables and figures) should be listed alphabetically.
 - Use **(ed.)** for one editor, and **(ed.s)** for multiple editors.
 - When listing two or more works by one author, use --- (20xx), such as after Kohl (1997), use --- (2001), etc, in chronologically ascending order.
 - Indicate (opening and closing) page numbers for articles in journals and for chapters in books.
 - The title of books and journals should be in italics. Double quotation marks are used for titles of journal articles, book chapters, dissertations, reports, working papers, unpublished material, etc.
 - For titles in a language other than English, provide an English translation in parentheses.
 - The location of endnotes within the text should be indicated by superscript numbers.

PLEASE USE THE FOLLOWING FOR STYLE AND PUNCTUATION IN REFERENCES:**BOOKS**

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

JOURNAL AND OTHER ARTICLES

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

UNPUBLISHED DISSERTATIONS AND THESES

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

ONLINE RESOURCES

- Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

WEBSITE

Garg, Bhavet (2011): Towards a New Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 <http://epw.in/user/viewabstract.jsp>

DATA MINING APPLICATION IN TRANSPORT SECTOR WITH SPECIAL REFERENCE TO THE ROAD ACCIDENTS IN KERALA

DR. JOHN T. ABRAHAM
DIRECTOR (ACADEMIC)
MOUNT ZION COLLEGE OF ENGINEERING
KADAMMANITTA

SWAPNA K. CHERIAN
ASST. PROFESSOR
DEPARTMENT OF COMMERCE
MSM COLLEGE
KAYAMKULAM

ABSTRACT

Data mining is widely applied in business applications including market segmentation, customer profiling, fraud detection, evaluation of retail promotions, credit risk analysis insurance policy, and in some military operations. The authors make use of the various concepts for analyzing and deriving the data with regard to the occurrence of accidents, death rate, injuries in relevance to transport of Kerala by both objective and subjective methods. Analysis is performed using LISp-Miner which is an academic project for support research and teaching of knowledge discovery in databases.

KEYWORDS

Data mining, transport, Knowledge discovery.

INTRODUCTION

Data mining can be defined as the non-trivial extraction of implicit, previously unknown, yet potentially useful information from data, and may be defined as the science of extracting useful information from large data sets or databases. Data-mining has the ability to discover patterns stored within historical data and is now considered a catalyst for enhancing business process by avoiding failure patterns and exploiting success patterns. With the help of data mining, derived knowledge, relationships and conclusions are often represented as models or patterns. The process is known as knowledge discovery in databases (KDD). Properly analyzing data and detecting these patterns is therefore of great importance to businesses. State Transportation Agencies (STAs) maintain their own project databases in many places. Data mining can provide a great tool for discovering the wealth of information contained in transport data. The term "KDD" is generally employed to describe the whole process of extraction of knowledge from data and the term "data mining" is often used exclusively for the discovery stage of the KDD process.

Data mining does not replace traditional statistical techniques. But, it is an extension of statistical methods. Statistical methods alone cannot automatically reveal all the possible hidden relationships within the database. A complex relationship indicating a job overhead increases proportionally with the number of change orders during a season of high productivity projects can be hidden within the projects database and can be detected using data mining techniques.

This paper describes a research effort undertaken to explore the applicability of data mining to a potential application in the transport industry. The goal was to discover any hidden rules of patterns stored within the data. Data mining was used to reveal unknown patterns and trends in the database of paving projects. Several data mining techniques have been developed over the last decade. Generally, the data mining techniques can be categorized in four categories, depending on their functionality: classification, clustering, numeric prediction, and association rules. The main difference between the different techniques is in the way they extract information (algorithms and methods used) and how results (knowledge discovery/rules) are expressed.

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. For example, a classification model could be used to identify loan applicants as low, medium, or high credit risks. A classification task begins with a data set in which the class assignments are known. Clustering is a data mining (machine learning) technique used to place data elements into related groups without advance knowledge of the group definitions. Popular clustering techniques include k-means clustering and expectation maximization (EM) clustering. The ultimate goal of data mining is prediction - and predictive data mining is the most common type of data mining and one that has the most direct business applications. The process of data mining consists of three stages: (1) the initial exploration, (2) model building or pattern identification with validation/verification, and (3) deployment. In data mining, association rule learning is a popular and well researched method for discovering interesting relations between variables in large databases. Piatetsky-Shapiro [1] describes analyzing and presenting strong rules discovered in databases using different measures of interestingness.

ANALYTIC METHODS

The core of all KDD processes is the use of analytic methods. The input to the analytic procedures is the prepared data, and the output is discovered knowledge. Analytic methods include regression analysis, discriminatory analysis, cluster analysis, decision trees and association rules. The data mining technique used in this research is association learning. In association learning, the goal is to discover any interesting patterns in the data by discovering association rules. Association rules differ from classification rules in two ways: they can predict any attribute (not just the group or class), and they can predict more than one attribute's value at a time. A typical association rule is represented in the following way:

Cause₁, Cause₂ => Result (or consequence)

That is, if Cause₁ and Cause₂ hold then Result (the association rule) applies, for n% of cases with x% confidence.

Each rule extracted is usually provided with a confidence level and a support. The confidence is the statistical value presenting the probability of a certain rule and the support is the number of cases/projects in which the rule is found. A pattern is defined as several identical or similar rules indicating a trend. Most of the data mining techniques use statistical tests when constructing rules or patterns and also for correcting models that depend too strongly on particular records in producing the rules and patterns (Feldens 2002). Since the goal when analyzing the dataset collected here was to detect any potentially useful patterns, association learning was the data mining technique selected to analyze the dataset collected in this paper.

The goal of the techniques in association rule is to detect relationships or associations between specific values of categorical variables in large data sets. LISp-Miner is an academic project for support research and teaching of knowledge discovery in databases. It is suitable namely for students, pilot and mid-size KDD projects. The core of the system is several KDD procedures capable to give answers to various both standard and non-standard analytical questions. There are also modules to solve some additional tasks.

SIGNIFICANCE OF PUBLIC TRANSPORT

Buses are one of the most important public transport services prevailing in India. It is the main source of linkage with Urban and Rural areas. In areas where railways have not reached, the main connectivity of remote area with towns and cities are made possible only because of public transport systems. These public transport systems are predominantly owned and operated by public agencies and by the state government. The state Road Transport Corporation introduced in 60s and 70s has paved the way in connecting villages and towns across the country.

India has a network of National Highways connecting all major cities and state capitals. As of 2005 India has a total of 66590 Km of national highway. Under National Highways Development project (NHDP) work is progressing to equip some of the important national highways into four lane. This authority opines that about 65% of the freight and 80% of the passenger traffic is carried by roads. The national highways carry about 40% of total road traffic even though only 2% of the road network is covered by highways. Vehicles grow at an average rate of 10.16% per annum. About 40 % of the villages in India lack access to all weather road and remain isolated during monsoon. As per 2009 estimate the total road length in India is 3320410 Kms which makes Indian road network the third largest road network in the world.

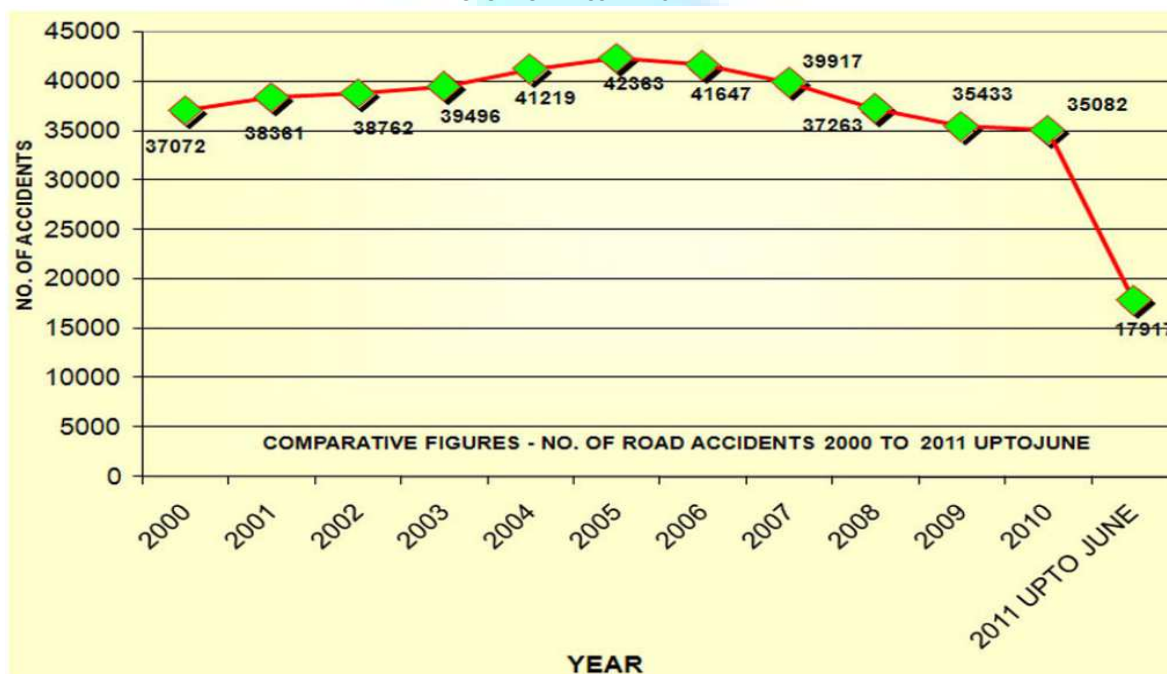
As per the road accident data published by the National Transportation Planning and Research Centre (NATPAC), Kerala has become the second most accident-prone State in the country. Almost an average of 12 persons die per day due to road accidents. In a square kilometer of area, the road accidents in Kerala is three times more than the national average. Considering the density of population and the area of the state, the occurrence of road accidents in Kerala is the highest in the country.

YEAR-WISE ACCIDENT OCCURRENCE TABLE

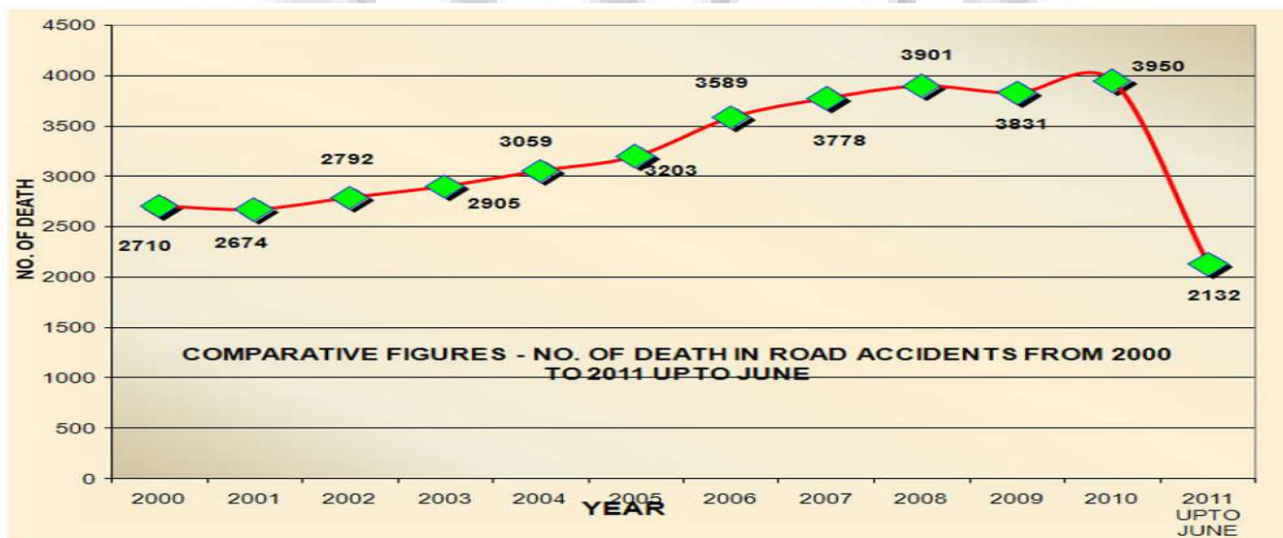
Field	Data type	Meaning
Rec-ID	Text	Primary Key
Year	Numeric	The Calendar Year
NOA	Numeric	No.of Accidents
NOD	Numeric	No.of Deaths
NOI	Numeric	No.of Injured

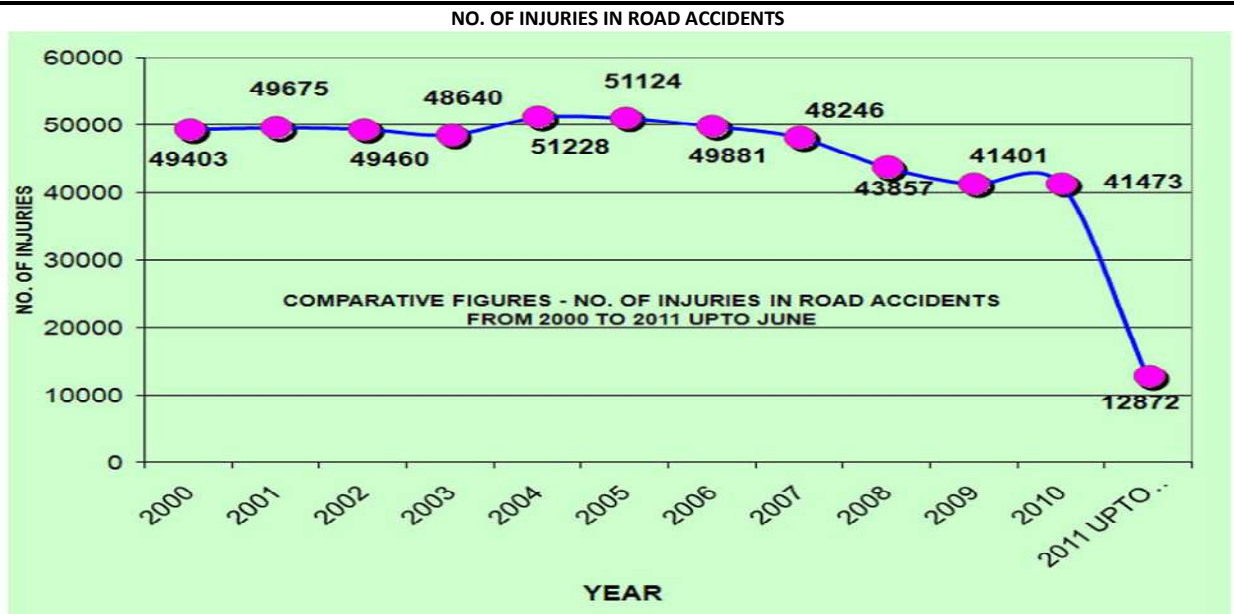
Association rules are generated and hypotheses are created with attributes, and must therefore be collected in a simple data table.

NO. OF ROAD ACCIDENTS IN KERALA



NO. OF DEATHS IN ROAD ACCIDENTS





CONCLUSION

The “long term” Pattern has a higher deposited value, and can be used for modifying timetables for adjusting the driving time between bus schedules. The statistics of accidents divulge much interesting statistical information. About 35082 accidents were recorded in the database in the year 2010. The greatest number of accidents during the day may be assumed to have occurred during the rush hour. The greatest number of accidents occurred in early morning hours. On the other hand, the total number of accidents in the evening, and at night, is below twenty per hour, appreciably fewer than in other hours of the day.

REFERENCES

1. Arun K Pujari- Data Mining techniques-Universities press-2001.
2. G. Piatetsky-Shapiro, U. Fayyad, and P. Smith. From data mining to knowledge discovery: An overview. In U.M. Fayyad, et al. (eds.), *Advances in Knowledge Discovery and Data Mining*, 1-35. AAAI/MIT Press, 1996.
3. <http://databases.about.com/od/datamining/g/clustering.htm>
4. http://docs.oracle.com/cd/B28359_01/datamine.111/b28129/classify.htm
5. <http://www.keralapolice.org/newsite/road.html>
6. Introduction to Data Mining by Pang-Ning Tan, Michael Steinbach, and Vipin Kumar
7. J. Han and M. Kamber. *Data Mining: Concepts and Techniques*. Morgan Kaufmann, 2000.
8. Jeawei Han and Micheline Camber-*Data Mining Concepts and Techniques*- Diane Cerra, 2006
9. Piatetsky-Shapiro, G. (1991), Discovery, analysis, and presentation of strong rules, in G. Piatetsky-Shapiro & W. J. Frawley, eds, ‘*Knowledge Discovery in Databases*’, AAAI/MIT Press, Cambridge, MA.
10. T. Imielinski and H. Mannila. A database perspective on knowledge discovery. *Communications of ACM*, 39:58-64, 1996.



REQUEST FOR FEEDBACK

Dear Readers

At the very outset, International Journal of Research in Computer Application and Management (IJRCM) acknowledges & appreciates your efforts in showing interest in our present issue under your kind perusal.

I would like to request you to supply your critical comments and suggestions about the material published in this issue as well as on the journal as a whole, on our E-mails i.e. infoijrcm@gmail.com or info@ijrcm.org.in for further improvements in the interest of research.

If you have any queries please feel free to contact us on our E-mail infoijrcm@gmail.com.

I am sure that your feedback and deliberations would make future issues better – a result of our joint effort.

Looking forward an appropriate consideration.

With sincere regards

Thanking you profoundly

Academically yours

Sd/-

Co-ordinator

ABOUT THE JOURNAL

In this age of Commerce, Economics, Computer, I.T. & Management and cut throat competition, a group of intellectuals felt the need to have some platform, where young and budding managers and academicians could express their views and discuss the problems among their peers. This journal was conceived with this noble intention in view. This journal has been introduced to give an opportunity for expressing refined and innovative ideas in this field. It is our humble endeavour to provide a springboard to the upcoming specialists and give a chance to know about the latest in the sphere of research and knowledge. We have taken a small step and we hope that with the active co-operation of like-minded scholars, we shall be able to serve the society with our humble efforts.

Our Other Journals

