

# CURRICULUM VITAE

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## 1. Work history

S. No.	Job title and location	Years
1	Post-doctoral fellow at The University of Tokyo	2012 to 2014
2	Researcher at the NICT, Japan	2014 to 2020
3	Specially Appointed Associate Professor at the University of Tokyo (part time)	2014 to 2020
4	The University of Aizu	2020 to ~

## 2. Education

Course	College/University	Year of Passing	Marks
Ph. D. (Computer science)	International Institute of Information Technology, Hyderabad, Telangana, India.	5/2005- 12/2011	7.13/10

Decision Models and Methodology of Management Research	Exchange student at IISc, Bangalore, Karnataka, India.	6/2005-12/2005	
MS (IT in Agriculture)	Dhirubhai Ambani Institute of Information and Communications Technology, Gandhinagar, Gujarat, India.	2003-2005	3.24/4
B-Tech (Agriculture)	Agricultural Engineering College, Bapatla, Andhra Pradesh, India.	1999-2003	7.25/10
Intermediate (12 <sup>th</sup> class)	Sri S. Siva Reddy Junior College	1997-1999	628/1000
10 <sup>th</sup> class	Nagarjuna English Medium High School	-1997	413/600

### 3. Awards

- Best research paper award in IEA/AIE 2019.
- Best research poster award in IBM-ICARE 2010.
- Government merit seat to study B.Tech in India. More than 100,000 students have written the exam.

### 4. Research Interest

Database systems; Dataware housing and Data mining; Web mining; Recommender systems, Urban transportation; Geographical information systems and Remote sensing; Spatio-temporal data mining.

### 5. Teaching Experience

#### a. Undergraduate courses:

S. No.	Course title	Years
7	SCCPs	2020, 2021, 2022
6	Ventures Experience Workshops	2021
5	Introduction to Data Mining	2021, 2022
4	Database Management Systems	2020, 2021, 2022
3	Programming in Java-1	2020, 2021, 2022
2	Software Comprehensive Exercise-2	2020, 2021, 2022
1	Web data modeling	2020

#### b. Graduate courses:

S. No.	Course title	Years
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4	Practical Data Analysis with Lunar and Planetary Databases	2022
3	Advanced Topics in Pattern Mining	2022
2	Advanced Topics in Data Science	2022
1	Introduction to Big Data Science	2020, 2021, 2022

## 6. Research projects

### 6.1. Development of all-weather road congestion prediction model

- a. **Place** : National Institute of Information and Communication Technology
- b. **Duration** : 2017 – 2019
- c. **Technologies:** Java, C++, Postgres
- d. **Description:** In this project, we have developed a novel association rule based ensemble classifier for predicting road congestion in Japan. Fast, scalable and parallelizable algorithms were developed for the classifier. Experimental results demonstrated that the proposed model has outperformed the existing state-of-the-art classifier by a very large margin.

### 6.2. Design and development of eSagu™ system into Smart phones

- a. **Place** : IIIT-H.
- b. **Funding agency** : Nokia, Finland and Media Lab Asia, Ministry of Information and Communication Technologies, New Delhi, India.
- c. **Duration** : 2006-2010
- d. **Technologies** : Java, J2ME, GPS, MYSQL.
- e. **Description:** The eSagu: An IT based Agro-advisory system ([www.esagu.in](http://www.esagu.in)) is system aimed at effective delivery of agricultural information to the (Indian) farming communities. In this project, we are make efforts to develop effective **human-mobile interactive** systems which will enable illiterate farmers to effective use mobile phones for acquiring necessary information.

### 6.3. Design and development of eSaguGIS system.

- a. **Place** : IIIT-H.
- b. **Funding agency** : Media Lab Asia, Ministry of Information and Communication Technologies, New Delhi, India.
- c. **Duration** : 2005-2007
- d. **Technologies** : Java, Map server, Apache web server and MYSQL (spatial).
- e. **Description:** In eSagu system, a set of agricultural experts delivers advices to a village. For effective advice delivery and monitoring of farm specific problems, spatial information is one of the key component. Hence, we are making efforts to

provide necessary spatial information to the agricultural experts which will enable them to analyze the farm conditions in a particular village effectively.

## 7. Research publications (SERIAL NUMBER IS BASED ON PUBLICATION ORDER)

### 7.1. Journal publications

S. No	Publication	Citation count	Impact factor
15	Uday Kiran, R., Veena, P., Ravikumar, P. et al. HDSHUI-miner: a novel algorithm for discovering spatial high-utility itemsets in high-dimensional spatiotemporal databases. <i>Appl Intell</i> 53, 8536–8561 (2023). <a href="https://doi.org/10.1007/s10489-022-04436-w">https://doi.org/10.1007/s10489-022-04436-w</a>		
14	José María Luna, Rage Uday Kiran, Philippe Fournier-Viger, Sebastián Ventura: Efficient mining of top-k high utility itemsets through genetic algorithms. <i>Inf. Sci.</i> 624: 529-553 (2023)		
13	Hong N. Dao, Penugonda Ravikumar, Palla Likhitha, Rage Uday Kiran, Yutaka Watanobe, Incheon Paik: Finding Stable Periodic-Frequent Itemsets in Big Columnar Databases. <i>IEEE Access</i> 11: 12504-12524 (2023)		
12	Philippe Fournier-Viger, Zhitian Li, Jerry Chun-Wei Lin, Rage Uday Kiran, Hamido Fujita: Efficient algorithms to identify periodic patterns in multiple sequences. <i>Inf. Sci.</i> 489: 205-226 (2019)	NA	4.1
11	R. Uday Kiran, Alampally Anirudh, Chennupati Saideep, Masashi Toyoda, P. Krishna Reddy, Masaru Kitsuregawa: Finding Periodic-Frequent Patterns in Temporal Databases using Periodic Summaries. To be appeared in the <i>Journal of Data Science and Pattern Recognition</i>	NA	7.69
10	P Fournier-Viger, Peng Yang, Zhitian Li, JCW Lin, R. Uday Kiran: Discovering Rare Correlated Periodic Patterns in Multiple Sequences. To be appeared in the <i>journal of Data and Knowledge Engineering</i>	NA	1.467
9	P Fournier-Viger, JCW Lin, <u>RU Kiran</u> , YS Koh, R Thomas: A survey of sequential pattern mining. <i>Data Science and Pattern Recognition</i> 1 (1), 54-77 (2018)	102	NA
8	J. N. Venkatesh, <u>R. Uday Kiran</u> , P. Krishna Reddy, Masaru Kitsuregawa: Discovering Periodic-Correlated Patterns in Temporal Databases. <i>T. Large-Scale Data- and Knowledge-Centered Systems</i> 38: 146-172 (2018) [EI]	1	NA
7	R. Uday Kiran, J. N. Venkatesh, Masashi Toyoda, Masaru Kitsuregawa, P. Krishna Reddy: Discovering partial periodic-frequent patterns in a transactional database. <i>Journal of Systems and Software</i> 125: 170-182 (2017) [EI]	9	2.278
6		22	2.278

	R. Uday Kiran, Masaru Kitsuregawa, P. Krishna Reddy:Efficient discovery of periodic-frequent patterns in very large databases. Journal of Systems and Software 112: 110-121 (2016) [EI]		
5	R. Uday Kiran, Masaru Kitsuregawa: Efficient discovery of correlated patterns using multiple minimum all-confidence thresholds. J. Intell. Inf. Syst. 45(3): 357-377 (2015) [EI]	5	1.107
4	P. Gowtham Srinivas, P. Krishna Reddy, A. V. Trinath, Bhargav Sripada, R. Uday Kiran(:Mining coverage patterns from transactional databases. J. Intell. Inf. Syst. 45(3): 423-439 (2015) [EI]	13	1.107
3	Wei Guo, R. Uday Kiran, and Sesishi Ninomiya: Illumination invariant segmentation of vegetation for time series wheat images based on decision tree model, Journal of Computers and Electronics in Agriculture, Vol. 96, pp. 58-66, 2013. [EI]	96	2.427
2	M.Kumara Swamy, P. Krishna Reddy, R. Uday Kiran, and M. Venugopal Reddy: Temporality-based User Interface Design Approaches for Desktop and Small Screens. Appeared in International Journal of Computational Science and Engineering (IJCSE), Vol.7, No.1, 2012. [EI]	5	NA
1	R. Uday Kiran, P. Krishna Reddy, Mittapally Kumara Swamy, G. Syamasundar Reddy:Analysing dynamics of crop problems by applying text analysis methods on farm advisory data of eSagu™. IJCSE 5(2): 154-164 (2010) [EI]	3	NA

## 7.2. Conference publications

S.No	Publication	Citation count
43	Philippe Fournier-Viger, Peng Yang, Jerry Chun-Wei Lin, Rage Uday Kiran: Discovering Stable Periodic-Frequent Patterns in Transactional Data. IEA/AIE 2019: 230-244	NA
42	T. Yashwanth, R. Uday Kiran, Masashi Toyoda, P. Krishna Reddy and Masaru Kitsuregawa: Discovering Partial Periodic High Utility Itemsets in Temporal Databases. To be appeared in DEXA 2019.	NA
41	R. Uday Kiran, Koji Zettsu, Yuji Uchiyama, Masashi Toyoda, Masaru Kitsuregawa, Philippe Fournier-Viger: Discovering Spatial High Utility Itemsets in Spatiotemporal Databases. To be appeared in SSDBM 2019.	NA
40	R. Uday Kiran, T. Yashwanth, Philippe Fournier-Viger, Masashi Toyoda, P. Krishna Reddy, Masaru Kitsuregawa: Efficient Discovery of High Utility-Frequent Itemsets using Cutoff Utility and Suffix Utility. PAKDD (2) 2019: 191-203 [EI]	NA
39	R. Uday Kiran, Amulya Kotni, Masashi Toyoda, P. Krishna Reddy, Subash Bhalla, Masaru Kitsuregawa: Efficient Discovery of Weighted Frequent Itemsets in Very Large Transactional Databases: A Re-visit. BigData 2018: 723-732.	NA
38		3

	Philippe Fournier-Viger, Zhitian Li, Jerry Chun-Wei Lin, Ruge Uday Kiran, Hamido Fujita: Discovering Periodic Patterns Common to Multiple Sequences. DaWaK 2018: 231-246 [EI]	
37	Amulya Kotni, R. Uday Kiran, Masashi Toyoda, P. Krishna Reddy, Masaru Kitsuregawa: Novel Data Segmentation Techniques for Efficient Discovery of Correlated Patterns Using Parallel Algorithms. DaWaK 2018: 355-370 [EI]	NA
36	Qian Li, Ziwei Li, Jin-Mao Wei, Zhenglu Yang, Yanhui Gu, R. Uday Kiran: A Story Coherence based Neural Network Model for Predicting Story Ending. WWW (Companion Volume) 2018: 119-12	NA
35	Alampally Anirudh, R. Uday Kiran, P. Krishna Reddy, Masashi Toyoda, Masaru Kitsuregawa: An Efficient Map-Reduce Framework to Mine Periodic Frequent Patterns. DaWaK 2017: 120-129 [EI]	2
34	R. Uday Kiran, J. N. Venkatesh, Philippe Fournier-Viger, Masashi Toyoda, P. Krishna Reddy, Masaru Kitsuregawa: Discovering Periodic Patterns in Non-uniform Temporal Databases. PAKDD (2) 2017: 604-617 [EI]	3
33	R. Uday Kiran, Haichuan Shang, Masashi Toyoda, Masaru Kitsuregawa: Discovering Partial Periodic Itemsets in Temporal Databases. SSDBM 2017: 30:1-30:6	4
32	J. N. Venkatesh, R. Uday Kiran, P. Krishna Reddy, Masaru Kitsuregawa: Discovering Periodic-Frequent Patterns in Transactional Databases Using All-Confidence and Periodic-All-Confidence. DEXA (1) 2016: 55-70 [EI]	5
31	Alampally Anirudh, R. Uday Kiran, P. Krishna Reddy, Masaru Kitsuregawa: Memory efficient mining of periodic-frequent patterns in transactional databases. SSCI 2016: 1-8	8
30	R. Uday Kiran, Haichuan Shang, Masashi Toyoda, Masaru Kitsuregawa: Discovering Recurring Patterns in Time Series. EDBT 2015: 97-108	18
29	R. Uday Kiran, Masaru Kitsuregawa: Finding Periodic Patterns in Big Data. BDA 2015: 121-133 [EI]	2
28	Haichuan Shang, Xiang Zhao, R. Uday Kiran, Masaru Kitsuregawa: Towards Scale-out Capability on Social Graphs. CIKM 2015: 253-262	3
27	R. Uday Kiran and Masaru Kitsuregawa: Discovering Chronic-Frequent Patterns in Transactional Databases. DNIS 2015: 12-26	6
26	R. Uday Kiran and Masaru Kitsuregawa: Novel Techniques to Reduce Search Space in Periodic-Frequent Pattern Mining. DASFAA (2) 2014: 377-391 [EI]	14
25		7

	R. Uday Kiran, Masaru Kitsuregawa: Mining Correlated Patterns with Multiple Minimum All-Confidence Thresholds. PAKDD Workshops 2013: 295-306	
24	R. Uday Kiran and Masaru Kitsuregawa: An Improved Neighborhood-Restricted Association Rule-based Recommender System. ADC 2013: 43-50	1
23	R. Uday Kiran and Masaru Kitsuregawa: Discovering Quasi-Periodic-Frequent Patterns in Transactional Databases. BDA 2013: 97-115 [EI]	9
22	R. Uday Kiran, Masaru Kitsuregawa: Towards Addressing the Coverage Problem in Association Rule-Based Recommender Systems. DEXA (2) 2013: 418-425 [EI]	1
21	R. Uday Kiran, Masashi Toyoda, Masaru Kitsuregawa: Towards efficient discovery of coverage patterns in transactional databases. SSDBM 2013: 38:1-38:4	3
20	R. Uday Kiran, Masaru Kitsuregawa: Towards Efficient Discovery of Frequent Patterns with Relative Support. COMAD 2012: 92-99	1
19	M. Venu, R. Uday Kiran, R. Kiranmai: A robust neural network classifier to model the compressive strength of high performance concrete using feature subset selection. COMPUTE 2012: 1	1
18	R. Uday Kiran, Masaru Kitsuregawa: Efficient Discovery of Correlated Patterns in Transactional Databases Using Items' Support Intervals. DEXA (1) 2012: 234-248 [EI]	7
17	P. Gowtham Srinivas, P. Krishna Reddy, Bhargav Sripada, R. Uday Kiran, D. Satheesh Kumar: Discovering Coverage Patterns for Banner Advertisement Placement. PAKDD (2) 2012: 133-144	13
16	Akshat Surana, R. Uday Kiran, P. Krishna Reddy: An Efficient Approach to Mine Periodic-Frequent Patterns in Transactional Databases. PAKDD Workshops 2011: 254-266	36
15	Somya Srivastava, R. Uday Kiran, P. Krishna Reddy: Discovering Diverse-Frequent Patterns in Transactional Databases. COMAD 2011: 69-78	4
14	R. Uday Kiran, P. Krishna Reddy: An Alternative Interestingness Measure for Mining Periodic-Frequent Patterns. DASFAA (1) 2011: 183-192 [EI]	21
13	Mohak Sharma, P. Krishna Reddy, R. Uday Kiran, Thirumalaisamy Ragunathan: Improving the Performance of Recommender System by Exploiting the Categories of Products. DNIS 2011: 137-146	NA
12	R. Uday Kiran, P. Krishna Reddy: Novel techniques to reduce search space in multiple minimum supports-based frequent pattern mining algorithms. EDBT 2011: 11-20	55
11		10

	Bhargav Sripada, Polepalli Krishna Reddy, R. Uday Kiran: Coverage patterns for efficient banner advertisement placement. WWW (Companion Volume) 2011: 131-132	
10	R. Uday Kiran, Polepalli Krishna Reddy: An Efficient Approach to Mine Rare Association Rules Using Maximum Items' Support Constraints. BNCOD 2010: 84-95	11
9	Akshat Surana, R. Uday Kiran, P. Krishna Reddy: Selecting a Right Interestingness Measure for Rare Association Rules. COMAD 2010: 115	31
8	R. Uday Kiran, P. Krishna Reddy: Mining periodic-frequent patterns with maximum items' support constraints. Bangalore Compute Conf. 2010: 1:1-1:8	8
7	R. Uday Kiran, P. Krishna Reddy: Mining Rare Association Rules in the Datasets with Widely Varying Items' Frequencies. DASFAA (1) 2010: 49-62 [EI]	33
6	R. Uday Kiran, P. Krishna Reddy: Towards Efficient Mining of Periodic-Frequent Patterns in Transactional Databases. DEXA (2) 2010: 194-208 [EI]	33
5	Mittapally Kumara Swamy, P. Krishna Reddy, R. Uday Kiran, M. Venugopal Reddy: Interface Tailoring by Exploiting Temporality of Attributes for Small Screens. DNIS 2010: 284-295	3
4	R. Uday Kiran, P. Krishna Reddy: An improved multiple minimum support based approach to mine rare association rules. IEEE CIDM 2009: 340-347	99
3	R. Uday Kiran, P. Krishna Reddy: Mining Rare Periodic-Frequent Patterns Using Multiple Minimum Supports. COMAD 2009	9
2	R. Uday Kiran, P. Krishna Reddy: An Improved Frequent Pattern-growth Approach to Discover Rare Association Rules. KDIR 2009: 43-52	24
1	R. Uday Kiran, P. Krishna Reddy: Understanding the Dynamics of Crop Problems by Analyzing Farm Advisory Data in eSagu TM . DNIS 2007: 272-284	1

## 8. Academic service

1. Program committee member for DEXA, DAWAK, PAKDD, AUSDM, TENCON, NCAA and BDA.
2. Reviewer for many reputed Journals IEEE TKDE, IEEE TKDD, JSS and DMKD

## References

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