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RESEARCH-ARTICLE FREE



WSDM Cup 2018: Music Recommendation and Churn Prediction

SIGS Conferences People

Yian Chen, Xing Xie, Shou-De Lin, Arden Chiu

Search ACM Digital



WSDM '18: Proceedings of the Eleventh ACM International Conference on Web Search and Data Mining • February 2018, pp 8

–9 • <https://doi.org/10.1145/3159652.3160605>

Excellent recommendation system facilitates users retrieving contents they like and, what's much more important – the contents they might like but they are not aware of yet. It will further increase the satisfaction of users and increase the retention ...

A Highlights ✓

Abstract

While the public's now listening to all kinds of music, recommendation algorithms still struggle in key areas.

In WSDM Cup 2018, the first task is to solve the abovementioned challenges to build a better music recommendation system.

The competition data and award are provided by KKBOX, a leading music streaming service in Taiwan.

Full Text

The competition data and award are provided by KKBOX, a leading music streaming service company from Taiwan.

However, the glory days of Radio DJs have passed, and musical gatekeepers have been replaced with personalizing algorithms and unlimited streaming services. While the public's now listening to all kinds of music, recommender systems still struggle in key areas such as the cold start problem[7][1] and context aware recommendation [6][8].

Subject

Machine learning

1 500



[IU: Intelligent User Interfaces \(3\)](#)
[MM: International Multimedia Conference \(3\)](#)
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RESEARCH-ARTICLE FREE



Cross-language Citation Recommendation via Hierarchical Representation Learning on Heterogeneous Graph

Search ACM Digital

[Zhuoren Jiang](#),[Yue Yin](#),[Liangcai Gao](#),[Yao Lu](#),[Xiaozhong Liu](#)

SIGIR '18: The 41st International ACM SIGIR Conference on Research & Development in Information Retrieval • June 2018, pp 635

–644 • <https://doi.org/10.1145/3209978.3210032>

While the volume of scholarly publications has increased at a frenetic pace, accessing and consuming the useful candidate papers, in very large digital libraries, is becoming an essential and challenging task for scholars. Unfortunately, because of ...

[A](#) Highlights ▾

Full Text

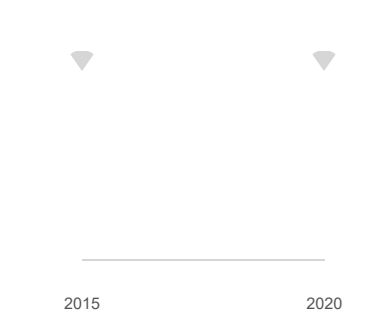
For instance, in Chinese/Japanese research context, machine learning methods can be important for word segmentation studies, which may not be the case for the English counterpart.

Tang et al. [29] proposed bilingual embedding algorithms, which were efficient for crosslanguage context-aware citation recommendation task. Session 5D: Recommender Systems – Applications SIGIR'18, July 8–12, 2018, Ann Arbor, MI, USA 635 Session 5D: Recommender Systems – Applications SIGIR'18, July 8–12, 2018, Ann Arbor, MI, USA 636 Session 5D: Recommender Systems – Applications SIGIR'18, July 8–12, 2018, Ann Arbor, MI, USA 637 Session 5D: Recommender Systems – Applications SIGIR'18, July 8–12, 2018, Ann Arbor, MI, USA 638 Session 5D: Recommender Systems – Applications SIGIR'18, July 8–12, 2018, Ann Arbor, MI, USA 639 Session 5D: Recommender Systems – Applications SIGIR'18, July 8–12, 2018, Ann Arbor, MI, USA 640 Session 5D: Recommender Systems – Applications SIGIR'18, July 8–12, 2018, Ann Arbor, MI, USA 641 Session 5D: Recommender Systems – Applications SIGIR'18, July 8–12, 2018, Ann Arbor, MI, USA 642 Session 5D: Recommender Systems – Applications SIGIR'18, July 8–12, 2018, Ann Arbor, MI, USA 643 Session 5D: Recommender Systems – Applications SIGIR'18, July 8–12, 2018, Ann Arbor, MI, USA 644

Subject

Machine learning
Machine learning approaches

Publication Date



[Past 2 years](#)

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5



480





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[Explainable Agents and Robots: Results from a Systematic Literature Review](#)

SIGS Conferences

People

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Sule Anjomshoae,



Amro Najjar,



Davide Calvaresi,



Kary Främling

AAMAS '19: Proceedings of the 18th International Conference on Autonomous Agents and MultiAgent Systems • May 2019, pp 1078–1088

Humans are increasingly relying on complex systems that heavily adopts Artificial Intelligence (AI) techniques. Such systems are employed in a growing number of domains, and making them explainable is an impelling priority. Recently, the domain of ...

A Highlights ▾

Full Text

SRQ6: Dynamics (Context- aware, user-aware) - What explanatory granularity has been provided with respect to the user and its context? The other studies assessed explanations in ubiquitous computing to allow users to understand the system's reasoning (e.g., [100]), search and rescue scenarios for robot behavior (e.g., [67]), and movie and music recommender systems (e.g., [59]). 17% 10% 9% 5% 5% 5% Robot collaborative task Robot navigation Game applications Search and rescue Training Recommender systems E-health Ubiquitous computing Figure 5: Application scenarios. Context- aware explanations have been proposed to implement effective control in ubiquitous systems (e.g., [65]), to facilitate context- aware explanations in human-robot teaming (e.g., [33]), and enhance robot navigation (e.g., [29, 43]).

Subject

Machine learning

1 482





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A Novelty-Seeking based Dining Recommender System

SIGS Conferences People

Search ACM Digital



Fuzheng Zhang, Kai Zheng, Nicholas Jing Yuan, Xing Xie,

Enhong Chen, + 1

WWW '15: Proceedings of the 24th International Conference on World Wide Web • May 2015, pp 1362–1372 • <https://doi.org/10.1145/2736277.2741095>

The rapid growth of location-based services provide the potential to understand people's mobility pattern at an unprecedented level, which can also enable food-service industry to accurately predict consumer's dining behavior. In this paper, by ...

A Highlights ▾

Abstract

On the one hand, when a user is predicted to be novelty-seeking, by incorporating the influence of restaurants' contextual factors such as price and service quality, we propose a context-aware collaborative filtering method to recommend restaurants she has never visited before.

Full Text

Next, when the user is predicted to do exploration (novelty-seeking status $s = 1$), we propose a context-aware collaborative filtering to recommend novel restaurants.

Conditional Random Fields (CRFs) [21], which is a discriminative undirected probabilistic graphical model for parsing sequential data like natural language texts [31], has been successfully applied to sequential labeling problems in machine learning and data mining.

Besides, this research sheds new light on other recommender systems such as POI and music recommendation, which can be used in more application scenarios.

16 484





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Magazines

Proceedings

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[Towards an ontology for personalized hotel room recommendation: student research abstract](#)

SIGS Conferences People

Search ACM Digital

[Ronald Ochieng Ojino](#)

SAC '20: Proceedings of the 35th Annual ACM Symposium on Applied Computing • March 2020, pp 2060

–2063 • <https://doi.org/10.1145/3341105.3374230>

This paper presents the design of an ontology based on user profile that allows personalizing guests' hotel rooms and services. The ontology being developed using NeON methodology, takes into consideration the maximum number of concepts associated with ...

Highlights

Full Text

Ke4WoT uses machine- learning techniques – k-means clustering and Word2vec algorithms – to reduce development time and effort for creating any schema while promoting re-use for inter-operability.

The study anticipates making the contribution of creating the first hotel room user profile personalized recommender system that combines ontology and machine learning techniques. [9] [10] [11] [12] [13] Bahramian, Z., & Abbaspour, R.

Recommender systems: introduction and challenges. In Recommender systems handbook, pages 1–34. Springer.



0 39



[ICMI '16: Proceedings of the 18th ACM International Conference on Multimodal Interaction](#)

[Yukiko I. Nakano](#), [Elisabeth André](#), [Toyoaki Nishida](#), [Louis-Philippe Morency](#),

+ 2

Highlights

Full Text

This year, ICMI focuses on machine learning for multimodal interaction as a special topic of interest.

Current technological advances have made context aware systems a reality [31], so context aware analysis of behaviors could be applied in the future. 7. This domain is multidisciplinary and involves speech processing, computer vision, machine learning, and ubiquitous computing.

Subject

ICMI-MLMI: Multimodal Interfaces and Machine Learning for Multimodal Interaction



1 2,915





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The Difference Between a Click and a Cart-Add: Learning Interaction-Specific Embeddings

SIGS Conferences People

Search ACM Digital



Xiaoting Zhao, Raphael Louca, Diane Hu, Liangjie Hong

WWW '20: Companion Proceedings of the Web Conference 2020 • April 2020, pp 454–460 • <https://doi.org/10.1145/3366424.3386197>

For large-scale online marketplaces with over millions of items, users come to rely on personalized recommendations to find relevant items from their massive inventory. One hallmark of the shopping experience in such online marketplaces is the many ways ...

A Highlights ▾

Full Text

Lastly, in [18] the authors leverage embeddings for a context-aware music recommendation system. One primary reason for the rise of embedding model usage in industry-scale recommender systems is due to its ability to quickly quantify relevance between two items simply by taking the inner product of its embeddings.

Top-k style recommender systems directly use the score from this retrieval step and Figure 2: Probability density function estimated for the purchase rate conditioned on clicks and cart-adds, respectively. provide the top k items as recommendations. However, for two-pass recommender systems, a second ranker is deployed to re-rank the candidate items using a more sophisticated machine learning model and features that are likely to achieve fine-grained ranking toward a specific metric (such as purchase or click optimization).

0 66





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Proceedings

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What is "intelligent" in intelligent user interfaces? a meta-analysis of 25 years of IUI

SIGs Conferences

People

Search ACM Digital



Sarah Theres Völkel,



Christina Schneegass,



Malin Eiband,



Daniel Buschek

IUI '20: Proceedings of the 25th International Conference on Intelligent User Interfaces • March 2020, pp 477

–487 • <https://doi.org/10.1145/3377325.3377500>

This reflection paper takes the 25th IUI conference milestone as an opportunity to analyse in detail the understanding of intelligence in the community: Despite the focus on intelligent UIs, it has remained elusive what exactly renders an interactive ...

A Highlights ▾

Full Text

For example, Sternberg [66] argues that "intelligence comprises the mental abilities necessary for adaptation to [...] any environmental context [...]

In a few cases, we merged multiple variations into one co-descriptor (e.g. automated, automatic, autonomous; and context-sensitive, context-dependent, context-aware).

As another example of such specific applications, recommender systems had ten further "variations" with a total paper occurrence count of eleven, including product recommender and presentation recommender. 4.2.2 Co-Descriptors.

0 70





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Learning Graph-based POI Embedding for Location-based Recommendation

Search ACM Digital



Min Xie,



Hongzhi Yin,



Hao Wang,



Fanjiang Xu,



Weitong Chen,



Sen Wang

CIKM '16: Proceedings of the 25th ACM International on Conference on Information and Knowledge Management • October 2016, pp 15

–24 • <https://doi.org/10.1145/2983323.2983711>

With the rapid prevalence of smart mobile devices and the dramatic proliferation of location-based social networks (LBSNs), location-based recommendation has become an important means to help people discover attractive and interesting points of interest ...

A Highlights ▾

Full Text

This issue plagues most of the existing collaborative filtering recommender systems. 2. Context Awareness.

To support real-time & context-aware recommendation, the final recommendations are made based on the embeddings of the user's latest preferences and the spatiotemporal context in the shared latent space. SVDFeature [2] is a machine learning toolkit designed to solve the feature-based matrix factorization.



87 1,637





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CSAN: Contextual Self-Attention Network for User Sequential Recommendation

Search ACM Digital



Xiaowen Huang,



Shengsheng Qian,



Quan Fang,



Jitao Sang,



Changsheng Xu

MM '18: Proceedings of the 26th ACM international conference on
Multimedia • October 2018, pp 447

–455 • <https://doi.org/10.1145/3240508.3240609>

The sequential recommendation is an important task for online user-oriented services, such as purchasing products, watching videos, and social media consumption. Recent work usually used RNN-based methods to derive an overall embedding of the whole ...

A Highlights ▾

Full Text

The final representation combines a temporal order encoded and context-aware vector representation for each independent behavior, which considers behavioral polysemy and dynamic dependency including long-term user taste and short-term interest.

One is {Parenting, Child rearing, Hollywood movies, Education, Music Education, Actress, Photography, Instructor, Education}, the other is {Monster hunter (Game), Hip-hop, Hollywood, Music production, Music Education, Music, American drama, Jazz, Europe music.}.

CSAN performs a feature-wise selection over the input sequence for a specific context to produce the context-aware representations.



4



835





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Adversarial Multimodal Representation Learning for Click-Through Rate Prediction

SIGS Conferences People

Search ACM Digital



Xiang Li, Chao Wang, Jiwei Tan, Xiaoyi Zeng, Dan Ou, Dan Ou, Bo Zheng

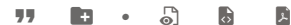
WWW '20: Proceedings of The Web Conference 2020 • April 2020, pp 827–836 • <https://doi.org/10.1145/3366423.3380163>

For better user experience and business effectiveness, Click-Through Rate (CTR) prediction has been one of the most important tasks in E-commerce. Although extensive CTR prediction models have been proposed, learning good representation of items from ...

A Highlights ▾**Full Text**

CCS CONCEPTS • Information systems → Content ranking; Online shopping; Recommender systems; Content analysis and feature selection; Data encoding and canonicalization.

Therefore, we propose a novel double-discriminators multimodal adversarial network to learn common latent subspace across multiple modalities. 2.3 Context Aware Personalization Model In recent years, there have been growing numbers of researches on the personalization based on deep neural networks for recommending music [29], news [21], videos [5], and jobs [3]. We thank our search engineering team for the large scale distributed machine learning platform of both training and serving.

 0
 64


SIGMOD '15: Proceedings of the 2015 ACM SIGMOD International Conference on Management of Data

Timos Sellis, Susan B. Davidson, Zack Ives

Welcome to SIGMOD 2015 -- officially, the 2015 ACM SIGMOD International Conference on the Management of Data! This year's conference is being held in the beautiful cultural capital of Australia, Melbourne. During the Gold Rush period of the 19th Century,...

A Highlights ▾**Abstract**

Christopher Ré will lead a panel on " Machine Learning and Databases: The Sound of Things to Come or a Cacophony of Hype?

Full Text

Owners of this data strive to obtain insights from it, often by applying machine learning algorithms.

Distributed machine learning algorithms, however, introduce a new set of challenges. For example, most machine learning al *Work done while the author was at the Qatar Computing Research Institute.

Mahout [2] is a collection of machine learning algorithms implemented on Hadoop MapReduce. MLlib [3] is a Spark implementation of some common machine learning algorithms.

 4,259
 164,959




Ling Liu, Ryen White

It is our great pleasure to welcome you to <I>The Web Conference 2019</I>. The Web Conference is the premier venue focused on understanding the current state and the evolution of the Web through the lens of computer science, computational social science,...

A Highlights ▾

Full Text

CCS CONCEPTS • Computing methodologies → Machine learning. KEYWORDS Recommender Systems; Multistakeholder recommendation; Multiobjective recommendation ACM Reference Format: Himan Abdollahpouri. 2019. Multiple messages have been designed per persuasive strategy, while all of them are context- aware, in the sense that they are valid for specific contexts. They integrated their approach in a context- aware mobile city guide for Athens, Greece with 18 scenic routes.

110 30,105

**Guidelines for Human-AI Interaction**

Saleema Amershi, Dan Weld, Mihaela Vorvoreanu, Adam Fourney, Besmira Nushi, + 8

CHI '19: Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems • May 2019, Paper No.: 3, pp 1

–13 • <https://doi.org/10.1145/3290605.3300233>

Advances in artificial intelligence (AI) frame opportunities and challenges for user interface design. Principles for human-AI interaction have been discussed in the human-computer interaction community for over two decades, but more study and ...

A Highlights ▾

**Full Text**

Similarly, researchers have for decades studied human interaction with intelligent context- aware computing systems including how to design for understandability and control of the underlying sensing systems [3, 23] and how to support ambiguity resolution [10].

[Music Recommenders, Product #1] "A little bit of hedging language: 'we think you'll like'." G3 Time services based on context.

While we drew AI design guidelines from the academic literature, the list we captured may not be exhaustive because, as discussed in Related Work, potential design guidelines are often not presented explicitly as such, making them difficult to search for via terms or combinations of terms such as "AI", "machine learning", "design", "principle" or "guideline".

42 4,433





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SA '16: SIGGRAPH ASIA 2016 Courses

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Niloy J. Mitra

The SIGGRAPH Asia Courses program will feature a variety of instructional sessions catered to the different levels of expertise of our attendees. Sessions from introductory to advanced topics in computer graphics and interactive techniques will be ...

A Highlights ▾**Full Text**

As is usually the case with machine learning paradigms, we distinguish between a training and a testing phase.

In most cases, machine learning techniques are adapted or developed from scratch to process geometric data.

Journal of Machine Learning Research 10, 71–106. LAFFERTY, J. D., MCCALLUM, A., AND PEREIRA, F. C. N. 2001.

 97 7,907


CSCW '17: Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing

Charlotte P. Lee, Steve Poltrock, Louise Barkhuus, Marcos Borges, Wendy Kellogg

Welcome to CSCW 2017, the ACM 2017 Conference on Computer Supported Cooperative Work and Social Computing! We are excited to welcome the CSCW community back to Portland, Oregon, where the second CSCW conference was held in 1988. Both Portland and CSCW ...

A Highlights ▾**Full Text**

Mayer et al. [38] found that people may actually want to meet dissimilar people because of environmental context.

Finally, while Mayer et al. [37, 38] suggest that people choose to meet based on factors such as environmental context, this implies the use of the location feature to meet offline.

s [37, 38] suggestion that people may choose to meet based on factors such as environmental context.

 2,081 82,330




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Onward! 2016: Proceedings of the 2016 ACM International Symposium
on New Ideas, New Paradigms, and Reflections on Programming and
Software

Eelco Visser,



Emerson Murphy-Hill,



Crista Lopes

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A Highlights ▾

Full Text

2016 Organization
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 Programmers and Programs: An Example Study on the Effect of Similarity
 and Number of Object Identifiers on the Readability of Source Code using
 Natural Texts Tim Marter, Paul Babucke, Philipp Lembken, and Stefan
 Hanenberg – University of Duisburg-Essen, Germany . . . 1 Emergent
 Software Services Nicolás Cardozo – University of Los Andes, Colombia
 15 Nez: Practical Open Grammar Language
 Kimio Kuramitsu – Yokohama National University, Japan
 29 Exploring Cheap Type Inference Heuristics in
 Dynamically Typed Languages Nevena Milojković and Oscar Nierstrasz –
 University of Bern, Switzerland 43 Papers II Bloqqi:
 Modular Feature-Based Block Diagram Programming Niklas Fors and Görel
 Hedin – Lund University, Sweden 57
 Building White-Box Abstractions by Program Refinement Mehrdad Afshari
 and Zhendong Su – University of California at Davis, USA
 74 Function Passing: A Model for Typed, Distributed Functional
 Programming Heather Miller, Philipp Haller, Normen Müller, and Jocelyn
 Boullier – EPFL, Switzerland; KTH, Sweden; Trivadis, Germany
 82 Extracting Code
 from Programming Tutorial Videos Shir Yadid and Eran Yahav – Technion,
 Israel 98 Papers III Object
 Spreadsheets: A New Computational Model for End-User Development of
 Data-Centric Web Applications Matt McCutchen, Shachar Itzhaky, and Daniel
 Jackson – Massachusetts Institute of Technology, USA 112
 Moldable, Context-Aware Searching with Spotter Andrei Chiş, Tudor Gîrba,
 Juraj Kubelka, Oscar Nierstrasz, Stefan Reichhart, and Aliaksei Syrel –
 University of Bern, Switzerland; feenk.com, Switzerland; University of Chile,
 Chile 128 Papers IV Exploring the Role of
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 Paradigm Shift Ivan Kuraj and Daniel Jackson – Massachusetts Institute of
 Technology, USA 145 Gramada: Immediacy in
 Programming Language Development Patrick Rein, Robert Hirschfeld, and
 Marcel Taeumel – HPI, USA 165 Helping
 Johnny Encrypt: Toward Semantic Interfaces for Cryptographic Frameworks
 Soumya Indela, Mukul Kulkarni, Kartik Nayak, and Tudor Dumitras –
 University of Maryland at College Park, USA 180 Leveraging a Corpus of
 Natural Language Descriptions for Program Similarity Meital Zilberstein and
 Eran Yahav – Technion, Israel 197
 ONWARD Essays Essays I How Are Programs Found?
 (Context-aware) Mashups Mashups are introduced to integrate data from
 multiple sources and provide new services from the combination of such
 data.



56 3,148





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[A](#) Highlights ▾
Full Text

Figure 4: Machine learning for dual-layered tactile recognition: convolution layer and a subsampling layer for the neural network [Krizhevsky et al. 2012]. In pursue of a next generation context-aware multimodal mobile interface to our environment, we have created a platform, which extends our awareness of the information within our environment using visual, haptic and aural augmentations.

Related Works There are various researches on the recommender systems of EC site [Kamishima 2003, Hijikata 2007].

 96 6,315


PROCEEDING


[FSE 2016: Proceedings of the 2016 24th ACM SIGSOFT International Symposium on Foundations of Software Engineering](#)

[Thomas Zimmermann](#),

[Jane Cleland-Huang](#),

[Zhendong Su](#)

1

 1,508 48,492

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[2](#)
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