User Modeling in Exploratory Search

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ABSTRACT

This is abstract.

Author Keywords

Exploratory Search; Information Retrieval; User Modeling.

ACM Classification Keywords

H.5.m. Information Interfaces and Presentation (e.g. HCI): Miscellaneous

General Terms

Human Factors; Design; Measurement.

INTRODUCTION

This is the introduction.

USER MODELING

Shortish explanation of user modeling key concepts. [17], [5]

Sterotypes

Modeling stereotypes. [3], [16]

Gathering of User Information

[15],

Personalization

Individualization of user models, Adaptive/Adaptable User Interfaces, intelligent user interfaces [2], [4], [1]

EXPLORATORY SEARCH IS A SUBTOPIC OF INFORMA-TION RETRIEVAL

Information retrieval

There are many goals in information retrieval and exploratory search is one of them. [6], [10]

Exploratory Search

Introduction to exploratory search. [13], [26], [20]

USER MODELING IN EXPLORATORY SEARCH

How has user modeling been used in supporting exploratory search, example cases? What challenges have emerged? [14], [19], [23], [11]

Evaluation of Exploratory Search Systems

What are the challenges in evaluating Exploratory Search Systems? [25], [12]

CONCLUSION

Here are the conclusions.

WHO ADDED WHAT REFERENCES?

Section	Tuire	Ilkka	Total
Section	10	10	20
Total	10	10	20

[17] Tuire

[5] Tuire

[3] Tuire [16] Tuire

[15] Ilkka

[2] Ilkka

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[6] Tuire

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[19] Tuire

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[25] Ilkka

[12] Ilkka

REFERENCES

- 1. Brusilovsky, P. Methods and techniques of adaptive hypermedia. *User Modelling and User-Adapted Interaction* 6, 2-3 (1996), 87–129. Cited By (since 1996): 577.
- 2. Bunt, A., Conati, C., and McGrenere, J. What role can adaptive support play in an adaptable system? In *Proceedings of the 9th international conference on Intelligent user interfaces*, ACM (2004), 117–124.

Submitted for review.

- 3. Dillon, A., and Watson, C. User analysis in hci the historical lessons from individual differences research. *International Journal of Human-Computer Studies 45*, 6 (12 1996), 619–637.
- 4. Findlater, L., and McGrenere, J. A comparison of static, adaptive, and adaptable menus. In *Proceedings of the SIGCHI conference on Human factors in computing systems*, ACM (2004), 89–96.
- 5. Fischer, G. User modeling in human–computer interaction. *User modeling and user-adapted interaction* 11, 1-2 (2001), 65–86.
- 6. Hearst, M., Elliott, A., English, J., Sinha, R., Swearingen, K., and Yee, K.-P. Finding the flow in website search. *Communications of the ACM 45*, 9 (2002), 42–49. cited By (since 1996) 110.
- 7. Hearst, M. A. Clustering versus faceted categories for information exploration. *Communications of the ACM* 49, 4 (2006), 59–61. Cited By (since 1996): 130.
- 8. Kobsa, A. Generic user modeling systems. vol. 11, Affiliation: Department of Information and Computer Science, University of California, Irvine, CA 92697-3425, United States (2001), 49–63. Cited By (since 1996): 218.
- 9. Kobsa, A. Generic user modeling systems, vol. 4321 LNCS of Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 2007. Cited By (since 1996): 28.
- 10. Kuhlthau, C. C. Inside the search process: Information seeking from the user's perspective. *JASIS* 42, 5 (1991), 361–371.
- 11. Kules, B., Capra, R., Banta, M., and Sierra, T. What do exploratory searchers look at in a faceted search interface? In *Proceedings of the ACM/IEEE Joint Conference on Digital Libraries* (2009), 313–322. Cited By (since 1996): 22.
- 12. Kules, B., and Shneiderman, B. Users can change their web search tactics: Design guidelines for categorized overviews. *Information Processing and Management 44*, 2 (2008), 463–484. Cited By (since 1996): 27.
- 13. Marchionini, G. Exploratory search: From finding to understanding. vol. 49, Affiliation: School of Information and Library Science, University of North Carolina, Chapel Hill, United States (2006), 41–46. Cited By (since 1996): 260.
- 14. OConnor, B., Krieger, M., and Ahn, D. Tweetmotif: Exploratory search and topic summarization for twitter. *Proceedings of ICWSM* (2010), 2–3.
- 15. Pazzani, M., and Billsus, D. Learning and revising user profiles: The identification of interesting web sites. *Machine Learning* 27, 3 (1997), 313–331. Cited By (since 1996): 419.

- Pu, H. ., Chuang, S. ., and Yang, C. Subject categorization of query terms for exploring web users' search interests. *Journal of the American Society for Information Science and Technology 53*, 8 (2002), 617–630. Cited By (since 1996): 62.
- 17. Rich, E. Users are individuals: individualizing user models. *International Journal of Human-Computer Studies* 51, 2 (8 1999), 323–338.
- Shen, X., Tan, B., and Zhai, C. Implicit user modeling for personalized search. Affiliation: Department of Computer Science, University of Illinois, Urbana-Champaign, IL, United States (2005), 824–831. Cited By (since 1996): 80.
- 19. Sugiyama, K., Hatano, K., and Yoshikawa, M. Adaptive web search based on user profile constructed without any effort from users. Affiliation: Nara Institute of Science and Technology, 8916-5 Takayama, Ikoma, Nara 630-0192, Japan; Affiliation: Nagoya University, Chikusa, Nagoya, Aichi 464-8601, Japan; Affiliation: Hitachi, Ltd., Software Division, Japan (2004), 675–684. Cited By (since 1996): 165.
- 20. Tvarožek, M. Exploratory search in the adaptive social semantic web. *Information Sciences and Technologies Bulletin of the ACM Slovakia 3*, 1 (2011), 42–51.
- 21. Van Velsen, L., Van Der Geest, T., Klaassen, R., and Steehouder, M. User-centered evaluation of adaptive and adaptable systems: a literature review. *Knowledge Engineering Review 23*, 3 (2008), 261.
- Wei, B., Liu, J., Zheng, Q., Zhang, W., Fu, X., and Feng, B. A survey of faceted search. *Journal of Web Engineering* 12, 1-2 (2013), 041–064.
- 23. White, R. W., Drucker, S. M., Marchionini, G., Hearst, M., and Schraefel, M. C. Exploratory search and hci: Designing and evaluating interfaces to support exploratory search interaction. In *Conference on Human Factors in Computing Systems Proceedings* (2007), 2877–2880. Cited By (since 1996): 3.
- 24. White, R. W., Kules, B., and Drucker, S. M. Supporting exploratory search, introduction, special issue, communications of the acm. *Communications of the ACM 49*, 4 (2006), 36–39.
- 25. White, R. W., Marchionini, G., and Muresan, G. Evaluating exploratory search systems. introduction to special topic issue of information processing and management. *Information Processing and Management* 44, 2 (2008), 433–436.
- 26. White, R. W., and Roth, R. A. Exploratory search: Beyond the query-response paradigm. *Synthesis Lectures on Information Concepts, Retrieval, and Services 1*, 1 (2009), 1–98.