



## DAFTAR PUSTAKA

- [1] C. C. Aggarwal, "An Introduction to Recommender Systems," in *Recommender Systems*, Cham: Springer International Publishing, 2016, pp. 1–28.
- [2] F. Ricci, L. Rokach, and B. Shapira, "Recommender Systems: Introduction and Challenges," in *Recommender Systems Handbook*, Second., F. Ricci, L. Rokach, and B. Shapira, Eds. Boston, MA: Springer US, 2015, pp. 1–34.
- [3] J. Lu, D. Wu, M. Mao, W. Wang, and G. Zhang, "Recommender system application developments: A survey," *Decis. Support Syst.*, vol. 74, pp. 12–32, Jun. 2015.
- [4] B. McKercher, "Towards a taxonomy of tourism products," *Tour. Manag.*, vol. 54, pp. 196–208, Jun. 2016.
- [5] D. Buhalis and A. Amaranggana, "Smart Tourism Destinations Enhancing Tourism Experience Through Personalisation of Services," in *Information and Communication Technologies in Tourism 2015*, I. Tussyadiah and A. Inversini, Eds. Switzerland: Springer International Publishing, 2015, pp. 377–389.
- [6] M. Andrejevic and M. Burdon, "Defining the Sensor Society," *Telev. New Media*, vol. 16, no. 1, pp. 19–36, Jan. 2015.
- [7] P. P. Tallon, "Corporate Governance of Big Data: Perspectives on Value, Risk, and Cost," *Computer (Long Beach, Calif.)*, vol. 46, no. 6, pp. 32–38, Jun. 2013.
- [8] S. Khusro, Z. Ali, and I. Ullah, "Recommender Systems: Issues, Challenges, and Research Opportunities," in *Lecture Notes in Electrical Engineering 376*, 2016, pp. 1179–1189.
- [9] J. Illig, A. Hotho, R. Jäschke, and G. Stumme, "A Comparison of Content-Based Tag Recommendations in Folksonomy Systems," in *Knowledge Processing and Data Analysis*, 2011, pp. 136–149.
- [10] A. B. Barragáns-Martínez, E. Costa-Montenegro, J. C. Burguillos, M. Rey-López, F. A. Mikic-Fontea, and A. Peleteiro, "A hybrid content-based and item-based collaborative filtering approach to recommend TV programs enhanced with singular value decomposition," *Inf. Sci. (Ny)*, vol. 180, no. 22, pp. 4290–4311, 2010.
- [11] A. Bellogín, P. Castells, and I. Cantador, "Improving memory-based collaborative filtering by neighbour selection based on user preference overlap," in *OAIR '13 Proceedings of the 10th Conference on Open Research Areas in Information Retrieval*, 2013, pp. 145–148.
- [12] I. Gunes, A. Bilge, and H. Polat, "Shilling Attacks Against Memory-Based Privacy-Preserving Recommendation Algorithms," *KSII Trans. Internet Inf.*



- Syst.*, vol. 7, no. 5, pp. 1272–1290, 2013.
- [13] T. M. Chang and W. F. Hsiao, “Model-based collaborative filtering to handle data reliability and ordinal data scale,” in *Fuzzy Systems and Knowledge Discovery (FSKD), 2011 Eighth International Conference on Shanghai*, 2011, pp. 2065–2069.
- [14] Y. Bergner, S. Droschler, G. Kortemeyer, S. Rayyan, D. Seaton, and D. E. Pritchard, “Model-Based Collaborative Filtering Analysis of Student Response Data: Machine-Learning Item Response Theory,” in *International Educational Data Mining Society, Paper presented at the International Conference on Educational Data Mining (EDM) (5th, Chania, Greece, Jun 19-21, 2012)*, 2012.
- [15] G. Adomavicius and A. Tuzhilin, “Toward the next generation of recommender systems: a survey of the state-of-the-art and possible extensions,” *IEEE Trans. Knowl. Data Eng.*, vol. 17, no. 6, pp. 734–749, Jun. 2005.
- [16] Hung-Wen Tung and Von-Wun Soo, “A personalized restaurant recommender agent for mobile e-service,” in *IEEE International Conference on e-Technology, e-Commerce and e-Service, 2004. EEE '04. 2004*, 2004, pp. 259–262.
- [17] W.-S. Yang and S.-Y. Hwang, “iTravel: A recommender system in mobile peer-to-peer environment,” *J. Syst. Softw.*, vol. 86, no. 1, pp. 12–20, Jan. 2013.
- [18] L. Martinez, R. M. Rodriguez, and M. Espinilla, “REJA: A Georeferenced Hybrid Recommender System for Restaurants,” in *2009 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology*, 2009, pp. 187–190.
- [19] R. Burke, “Hybrid Recommender Systems: Survey and Experiments,” *User Model. User-adapt. Interact.*, vol. 12, no. 4, pp. 331–370, 2002.
- [20] J. P. Lucas, N. Luz, M. N. Moreno, R. Anacleto, A. Almeida Figueiredo, and C. Martins, “A hybrid recommendation approach for a tourism system,” *Expert Syst. Appl.*, vol. 40, no. 9, pp. 3532–3550, Jul. 2013.
- [21] A. Moreno, A. Valls, D. Isern, L. Marin, and J. Borràs, “SigTur/E-Destination: Ontology-based personalized recommendation of Tourism and Leisure Activities,” *Eng. Appl. Artif. Intell.*, vol. 26, no. 1, pp. 633–651, Jan. 2013.
- [22] S. Schiaffino and A. Amandi, “Building an expert travel agent as a software agent,” *Expert Syst. Appl.*, vol. 36, no. 2, pp. 1291–1299, Mar. 2009.
- [23] C. C. Aggarwal, “Time- and Location-Sensitive Recommender Systems,” in *Recommender Systems*, Cham: Springer International Publishing, 2016, pp. 283–308.



- [24] N. Lathia, “The Anatomy of Mobile Location-Based Recommender Systems,” in *Recommender Systems Handbook*, Second., F. Ricci, L. Rokach, and B. Shapira, Eds. Boston, MA: Springer US, 2015, pp. 493–510.
- [25] I. Guy, “Social Recommender Systems,” in *Recommender Systems Handbook*, Second., F. Ricci, L. Rokach, and B. Shapira, Eds. Boston, MA: Springer US, 2015, pp. 511–543.
- [26] C. C. Aggarwal, “Social and Trust-Centric Recommender Systems,” in *Recommender Systems*, Cham: Springer International Publishing, 2016, pp. 345–384.
- [27] C. C. Aggarwal, “Context-Sensitive Recommender Systems,” in *Recommender Systems*, Cham: Springer International Publishing, 2016, pp. 255–281.
- [28] T. Ruotsalo *et al.*, “SMARTMUSEUM: A mobile recommender system for the Web of Data,” *Web Semant. Sci. Serv. Agents World Wide Web*, vol. 20, pp. 50–67, May 2013.
- [29] A. García-Crespo, J. Chamizo, I. Rivera, M. Mencke, R. Colomo-Palacios, and J. M. Gómez-Berbis, “SPETA: Social pervasive e-Tourism advisor,” *Telemat. Informatics*, vol. 26, no. 3, pp. 306–315, Aug. 2009.
- [30] P. Avesani, P. Massa, and R. Tiella, “A trust-enhanced recommender system application,” in *Proceedings of the 2005 ACM symposium on Applied computing - SAC '05*, 2005, p. 1589.
- [31] A. Pashtan, R. Blattler, A. Heusser, and P. Scheuermann, “CATIS: A Context-Aware Tourist Information System,” in *Proceedings of the 4th International Workshop of Mobile Computing, Rostock*, 2003.
- [32] G. Chen and D. Kotz, “A Survey of Context-Aware Mobile Computing Research,” *Science (80-. )*, vol. 3755, pp. 1–16, 2000.
- [33] B. Schilit, N. Adams, and R. Want, “Context-aware computing applications,” in *Workshop on Mobile Computing Systems and Applications*, 1994, pp. 85–90.
- [34] G. D. Abowd, A. K. Dey, P. J. Brown, N. Davies, M. Smith, and P. Steggles, “Towards a Better Understanding of Context and Context-Awareness,” in *Computing Systems*, vol. 40, no. 3, 1999, pp. 304–307.
- [35] D. Moen, N. McKelvey, K. Curran, and N. Subaginy, “Context Awareness in Mobile Devices,” *Mobile and Wireless Computing*. IGI Global, pp. 247–252, 2015.
- [36] P. Germanakos and M. Belk, “User Modeling,” in *Human-Centred Web Adaptation and Personalization*, Springer International Publishing, 2016, pp. 79–102.
- [37] X. Amatriain and J. M. Pujol, “Data Mining Methods for Recommender Systems,” in *Recommender Systems Handbook*, Second., F. Ricci, L.



- Rokach, and B. Shapira, Eds. Boston, MA: Springer US, 2015, pp. 227–262.
- [38] H. Yin, W. Wang, H. Wang, L. Chen, and X. Zhou, “Spatial-Aware Hierarchical Collaborative Deep Learning for POI Recommendation,” *IEEE Trans. Knowl. Data Eng.*, vol. 29, no. 11, pp. 2537–2551, Nov. 2017.
- [39] A. M. Elkahky, Y. Song, and X. He, “A Multi-View Deep Learning Approach for Cross Domain User Modeling in Recommendation Systems,” in *Proceedings of the 24th International Conference on World Wide Web - WWW '15*, 2015, pp. 278–288.
- [40] J. Wei, J. He, K. Chen, Y. Zhou, and Z. Tang, “Collaborative filtering and deep learning based recommendation system for cold start items,” *Expert Syst. Appl.*, vol. 69, pp. 29–39, Mar. 2017.
- [41] J. He and W. W. Chu, “A Social Network-Based Recommender System (SNRS),” in *Data Mining for Social Network Data*, 2010, pp. 47–74.
- [42] H. Ma, D. Zhou, C. Liu, M. R. Lyu, and I. King, “Recommender systems with social regularization,” in *Proceedings of the fourth ACM international conference on Web search and data mining - WSDM '11*, 2011, p. 287.
- [43] P. Gundecha and H. Liu, “Mining Social Media: A Brief Introduction,” in *2012 TutORials in Operations Research*, INFORMS, 2012, pp. 1–17.
- [44] F. Ricci, L. Rokach, and B. Shapira, “Introduction to Recommender Systems Handbook,” in *Recommender Systems Handbook*, no. OCTOBER, Boston, MA: Springer US, 2011, pp. 1–35.
- [45] W. Woerndl, J. Huebner, R. Bader, and D. Gallego-Vico, “A model for proactivity in mobile, context-aware recommender systems,” in *Proceedings of the fifth ACM conference on Recommender systems - RecSys '11*, 2011, p. 273.
- [46] H. Gao, J. Tang, X. Hu, and H. Liu, “Exploring temporal effects for location recommendation on location-based social networks,” in *Proceedings of the 7th ACM conference on Recommender systems - RecSys '13*, 2013, pp. 93–100.
- [47] T. H. Dao, S. R. Jeong, and H. Ahn, “A novel recommendation model of location-based advertising: Context-Aware Collaborative Filtering using GA approach,” *Expert Syst. Appl.*, vol. 39, no. 3, pp. 3731–3739, Feb. 2012.
- [48] O. Khalid, M. U. S. Khan, S. U. Khan, and A. Y. Zomaya, “OmniSuggest: A Ubiquitous Cloud-Based Context-Aware Recommendation System for Mobile Social Networks,” *IEEE Trans. Serv. Comput.*, vol. 7, no. 3, pp. 401–414, Jul. 2014.
- [49] M. A. Domingues, A. M. Jorge, and C. Soares, “Dimensions as Virtual Items: Improving the predictive ability of top-N recommender systems,” *Inf. Process. Manag.*, vol. 49, no. 3, pp. 698–720, May 2013.
- [50] L. Hong, L. Zou, C. Zeng, L. Zhang, J. Wang, and J. Tian, “Context-Aware



- Recommendation Using Role-Based Trust Network,” *ACM Trans. Knowl. Discov. Data*, vol. 10, no. 2, pp. 1–25, Oct. 2015.
- [51] X. Ramirez-Garcia and M. García-Valdez, “Post-Filtering for a Restaurant Context-Aware Recommender System,” in *Studies in Computational Intelligence*, 2014, pp. 695–707.
- [52] G. Chen and L. Chen, “Augmenting service recommender systems by incorporating contextual opinions from user reviews,” *User Model. User-adapt. Interact.*, vol. 25, no. 3, p. 295, 2015.
- [53] D. Yang, D. Zhang, Z. Yu, and Z. Wang, “A sentiment-enhanced personalized location recommendation system,” in *Proceedings of the 24th ACM Conference on Hypertext and Social Media - HT '13*, 2013, pp. 119–128.
- [54] J.-D. Zhang and C.-Y. Chow, “CoRe: Exploiting the personalized influence of two-dimensional geographic coordinates for location recommendations,” *Inf. Sci. (Ny)*, vol. 293, pp. 163–181, Feb. 2015.
- [55] X. Ren, M. Song, H. E, and J. Song, “Context-aware probabilistic matrix factorization modeling for point-of-interest recommendation,” *Neurocomputing*, vol. 241, pp. 38–55, Jun. 2017.
- [56] Y. Zheng, “Context Suggestion: Solutions and Challenges,” in *2015 IEEE International Conference on Data Mining Workshop (ICDMW)*, 2015, pp. 1602–1603.
- [57] Y. Zheng, B. Mobasher, and R. Burke, “User-Oriented Context Suggestion,” in *Proceedings of the 2016 Conference on User Modeling Adaptation and Personalization - UMAP '16*, 2016, pp. 249–258.
- [58] Y. Zheng, B. Mobasher, and R. Burke, “Context Recommendation Using Multi-label Classification,” in *2014 IEEE/WIC/ACM International Joint Conferences on Web Intelligence (WI) and Intelligent Agent Technologies (IAT)*, 2014, pp. 288–295.
- [59] Y. Zheng, “Context suggestion,” in *Proceedings of the International Conference on Web Intelligence - WI '17*, 2017, pp. 753–760.
- [60] Y. Zheng, “Indirect Context Suggestion,” in *Proceedings of the 25th Conference on User Modeling, Adaptation and Personalization - UMAP '17*, 2017, no. M1c, pp. 399–400.
- [61] R. Soltanpoor and T. Sellis, “Prescriptive Analytics for Big Data,” in *Databases Theory and Applications. ADC 2016. Lecture Notes in Computer Science*, vol. 9877, Springer, Cham, 2016, pp. 245–256.
- [62] M. Ramannavar and N. S. Signal, “A Proposed Contextual Model for Big Data Analysis Using Advanced Analytics,” in *Proceedings of CSI 2015*, Springer, Singapore, 2018, pp. 329–339.
- [63] P. Deshpande, “Predictive and Prescriptive Analytics in Big Data Era,” in



*Third International Conference on Computing, Communication and Signal Processing (ICCASp 2018)*, Springer, Singapore, 2019, pp. 123–132.

- [64] K. Lepenioti, A. Bousdekis, D. Apostolou, and G. Mentzas, *Business Information Systems Workshops*, vol. 339. Cham: Springer International Publishing, 2019.
- [65] K. Lepenioti, A. Bousdekis, D. Apostolou, and G. Mentzas, “Prescriptive Analytics: A Survey of Approaches and Methods,” 2019, pp. 449–460.
- [66] D. Perugini and M. Perugini, “Characterised and personalised predictive-prescriptive analytics using agent-based simulation,” *Int. J. Data Anal. Tech. Strateg.*, vol. 6, no. 3, p. 209, 2014.
- [67] B. Kawas, M. S. Squillante, D. Subramanian, and K. R. Varshney, “Prescriptive Analytics for Allocating Sales Teams to Opportunities,” in *2013 IEEE 13th International Conference on Data Mining Workshops*, 2013, pp. 211–218.
- [68] M. Lee, M. Cho, J. Gim, D.-H. Jeong, and H. Jung, “Prescriptive Analytics System for Scholar Research Performance Enhancement,” in *Communications in Computer and Information Science*, vol. 434 PART I, 2014, pp. 186–190.
- [69] K. A. Achmad, L. E. Nugroho, A. Djunaedi, and Widyawan, “Context-Aware based Restaurant Recommender System: A Prescriptive Analytics,” *J. Eng. Sci. Technol.*, vol. 14, no. 5, 2019.
- [70] B. Neuhofer, D. Buhalis, and A. Ladkin, “Smart technologies for personalized experiences: a case study in the hospitality domain,” *Electron. Mark.*, vol. 25, no. 3, pp. 243–254, Sep. 2015.
- [71] D. R. Fesenmaier, F. Ricci, S. Erwin, W. Karl, and Z. Cristiano, “DIETORECS: Travel Advisory for Multiple Decision Styles,” in *Information and Communication Technologies in Tourism 2003*, Vienna: Springer Vienna, 2003, pp. 232–241.
- [72] L. Console, I. Torre, I. Lombardi, S. Gioria, and V. Surano, “Personalized and Adaptive Services on Board a Car: An Application for Tourist Information,” *J. Intell. Inf. Syst.*, vol. 21, no. 3, pp. 249–284, 2003.
- [73] A. Alslaity and T. Tran, *Towards a Comprehensive Evaluation of Recommenders: A Cognition-Based Approach*. Springer International Publishing, 2018.
- [74] S. Gomez-Jaramillo and J. M. Cadavid, “Selection of Collaborative Learning Techniques Using Bloom ’ s Taxonomy,” in *Communications in Computer and Information Science*, 2016, vol. 606, pp. 1–11.
- [75] C. Biancalana, F. Gasparetti, A. Micarelli, and G. Sansonetti, “An approach to social recommendation for context-aware mobile services,” *ACM Trans. Intell. Syst. Technol.*, vol. 4, no. 1, pp. 1–31, 2013.



- [76] J. Hong, E.-H. Suh, J. Kim, and S. Kim, "Context-aware system for proactive personalized service based on context history," *Expert Syst. Appl.*, vol. 36, no. 4, pp. 7448–7457, May 2009.
- [77] M.-H. Kuo, L.-C. Chen, and C.-W. Liang, "Building and evaluating a location-based service recommendation system with a preference adjustment mechanism," *Expert Syst. Appl.*, vol. 36, no. 2, pp. 3543–3554, Mar. 2009.
- [78] H. Wu, K. Yue, X. Liu, Y. Pei, and B. Li, "Context-Aware Recommendation via Graph-Based Contextual Modeling and Postfiltering," *Int. J. Distrib. Sens. Networks*, vol. 11, no. 8, p. 613612, Aug. 2015.
- [79] Z. Xu, L. Chen, and G. Chen, "Topic based context-aware travel recommendation method exploiting geotagged photos," *Neurocomputing*, vol. 155, pp. 99–107, May 2015.
- [80] G. Adomavicius and A. Tuzhilin, "Context-Aware Recommender Systems," in *Recommender Systems Handbook*, Second., F. Ricci, L. Rokach, and B. Shapira, Eds. Boston, MA: Springer US, 2015, pp. 191–226.
- [81] S. Valencia Rodríguez and H. L. Viktor, "A Personalized Location Aware Multi-Criteria Recommender System Based on Context-Aware User Preference Models," in *IFIP Advances in Information and Communication Technology*, 2013, pp. 30–39.
- [82] J. Ben Schafer, D. Frankowski, J. Herlocker, and S. Sen, "Collaborative Filtering Recommender Systems," in *The Adaptive Web*, Berlin, Heidelberg: Springer Berlin Heidelberg, 2007, pp. 291–324.
- [83] M. J. Pazzani and D. Billsus, "Content-Based Recommendation Systems," in *The Adaptive Web*, Berlin, Heidelberg: Springer Berlin Heidelberg, 2007, pp. 325–341.
- [84] G. Adomavicius and A. Tuzhilin, "Context-Aware Recommender Systems," in *Recommender Systems Handbook*, Boston, MA: Springer US, 2011, pp. 217–253.
- [85] N. M. Villegas, C. Sánchez, J. Díaz-Cely, and G. Tamura, "Characterizing context-aware recommender systems: A systematic literature review," *Knowledge-Based Syst.*, vol. 140, pp. 173–200, Jan. 2018.
- [86] D. Gavalas, C. Konstantopoulos, K. Mastakas, and G. Pantziou, "Mobile recommender systems in tourism," *J. Netw. Comput. Appl.*, vol. 39, pp. 319–333, 2014.
- [87] G. Fischer, "Context-aware systems," in *Proceedings of the International Working Conference on Advanced Visual Interfaces - AVI '12*, 2012, p. 287.
- [88] Y. Shi, M. Larson, and A. Hanjalic, "Mining contextual movie similarity with matrix factorization for context-aware recommendation," *ACM Trans. Intell. Syst. Technol.*, vol. 4, no. 1, pp. 1–19, Jan. 2013.
- [89] G. Reynolds, D. Barry, T. Burke, and E. Coyle, "Interacting with large music



- collections: Towards the use of environmental metadata,” in *2008 IEEE International Conference on Multimedia and Expo*, 2008, pp. 989–992.
- [90] M. A. Hossain, P. K. Atrey, and A. El Saddik, “Gain-based Selection of Ambient Media Services in Pervasive Environments,” *Mob. Networks Appl.*, vol. 13, no. 6, pp. 599–613, Dec. 2008.
- [91] G. Adomavicius and A. Tuzhilin, “Context-aware recommender systems,” in *Recommender systems handbook*, Springer, 2011, pp. 217–253.
- [92] J. H. Su, H. H. Yeh, P. S. Yu, and V. S. Tseng, “Music recommendation using content and context information mining,” *Intell. Syst. IEEE*, vol. 25, no. 1, pp. 16–26, 2010.
- [93] Zhiwen Yu, Xingshe Zhou, Daqing Zhang, Chung-Yau Chin, Xiaohang Wang, and Ji Men, “Supporting Context-Aware Media Recommendations for Smart Phones,” *IEEE Pervasive Comput.*, vol. 5, no. 3, pp. 68–75, Jul. 2006.
- [94] G. Adomavicius, A. Tuzhilin, and S. Sen, “Incorporating Contextual Information in Recommender Systems Using a Multidimensional Approach,” *ACM Trans. Inf. Syst.*, vol. 23, no. 1, pp. 103–145, 2005.
- [95] Z. Sun *et al.*, “Recommender systems based on social networks,” *J. Syst. Softw.*, vol. 99, pp. 109–119, Jan. 2015.
- [96] U. Gretzel, M. Sigala, Z. Xiang, and C. Koo, “Smart tourism: foundations and developments,” *Electron. Mark.*, vol. 25, no. 3, pp. 179–188, Sep. 2015.
- [97] F. Anuar and U. Gretzel, “Privacy Concerns in the Context of Location-Based Services for Tourism,” in *ENTER 2011 Conference, Innsbruck, Austria*, 2011.
- [98] X. Hu, X. Li, E. C. H. Ngai, V. C. M. Leung, and P. Kruchten, “Multidimensional context-aware social network architecture for mobile crowdsensing,” *IEEE Commun. Mag.*, vol. 52, no. 6, pp. 78–87, 2014.
- [99] P. Domingos and M. Richardson, “Mining the network value of customers,” in *Proceedings of the seventh ACM SIGKDD international conference on Knowledge discovery and data mining - KDD '01*, 2001, pp. 57–66.
- [100] M. Richardson and P. Domingos, “Mining knowledge-sharing sites for viral marketing,” in *Proceedings of the eighth ACM SIGKDD international conference on Knowledge discovery and data mining - KDD '02*, 2002, p. 61.
- [101] Y. Lu, P. Tsaparas, A. Ntoulas, and L. Polanyi, “Exploiting social context for review quality prediction,” in *Proceedings of International Conference on WWW, Raleigh, North Carolina, USA, April 26–30*, 2010, pp. 691–700.
- [102] Q. Mei, D. Cai, D. Zhang, and C. Zhai, “Topic Modeling with Network Regularization,” in *the International World Wide Web Conference Committee (IW3C2) WWW 2008, April 21–25, 2008, Beijing, China*, 2008.



- [103] C.-C. Chang and K.-H. Chu, "A Recommender System Combining Social Networks for Tourist Attractions," in *2013 Fifth International Conference on Computational Intelligence, Communication Systems and Networks*, 2013, pp. 42–47.
- [104] X. Wang and W. Huang, "Research on social regularization-based recommender algorithm." pp. 77–80, 2014.
- [105] F. Liu and H. J. Lee, "Use of social network information to enhance collaborative filtering performance," *Expert Syst. Appl.*, vol. 37, no. 7, pp. 4772–4778, Jul. 2010.
- [106] M. A. Russell, "Mining Facebook: Analyzing Fan Pages, Examining Friendships, and More," in *Mining the Social Web: Analyzing Data from Facebook, Twitter, LinkedIn, and Other Social Media Sites*, O'Reilly Media, Inc., 2014, pp. 45–88.
- [107] M. A. Russell, "Mining Twitter: Exploring Trending Topics, Discovering What People Are Talking About, and More," in *Mining the Social Web: Analyzing Data from Facebook, Twitter, LinkedIn, and Other Social Media Sites*, O'Reilly Media, Inc., 2014, pp. 5–44.
- [108] M. A. Russell, *Mining the Social Web: Analyzing Data from Facebook, Twitter, LinkedIn, and Other Social Media Sites*. O'Reilly Media, Inc., 2014.
- [109] Y. Shi, A. Karatzoglou, L. Baltrunas, M. Larson, and A. Hanjalic, "CARS2: Learning Context-aware Representations for Context-aware Recommendations," in *Proceedings of the 23rd ACM International Conference on Conference on Information and Knowledge Management - CIKM '14*, 2014, pp. 291–300.
- [110] M. Unger, A. Bar, B. Shapira, and L. Rokach, "Towards latent context-aware recommendation systems," *Knowledge-Based Syst.*, vol. 104, pp. 165–178, Jul. 2016.
- [111] A. Q. Macedo, L. B. Marinho, and R. L. T. Santos, "Context-Aware Event Recommendation in Event-based Social Networks," in *Proceedings of the 9th ACM Conference on Recommender Systems - RecSys '15*, 2015, pp. 123–130.
- [112] BPS, "Statistik Indonesia 2014." Badan Pusat Statistik, Jakarta, pp. 1–676, 2014.
- [113] Ministry of Culture and Tourism of the Republic of Indonesia, "Final Report Blue Print Tourism Destination Development," 2006.
- [114] Q. Tu and A. Liu, "Framework of Smart Tourism Research and Related Progress in China," in *In International Conference on Management and Engineering (CME 2014)*, 2014, pp. 140–146.
- [115] D. Buhalis and A. Amaranggana, "Smart Tourism Destinations," in *Information and Communication Technologies in Tourism 2014*, I. Z. Xiang



- and I. Tussyadiah, Eds. Heidelberg: Springer, 2014.
- [116] D. Buhalis, "Information Technology in Tourism," in *Tourism Principles and Practice*, Third., London: Pearson Education Limited, 2005, pp. 702–736.
- [117] W. Nuryanti *et al.*, "Executive Summary Cetak Biru Pemasaran Pariwisata Indonesia," 2003.
- [118] H. Kartajaya and S. Nirwandar, *Tourism Marketing 3.0 Turning Tourist to Advocate*. Jakarta: PT Gramedia Pustaka Utama, 2013.
- [119] R. Law, D. Buhalis, and C. Cobanoglu, "Progress on information and communication technologies in hospitality and tourism," *Int. J. Contemp. Hosp. Manag.*, vol. 26, no. 5, pp. 727–750, Jul. 2014.
- [120] H. Kim, J.-N. Lee, and J. Han, "The role of IT in business ecosystems," *Commun. ACM*, vol. 53, no. 5, p. 151, May 2010.
- [121] H. Werthner and S. Klein, "Information technology and tourism: a challenging relationship." Springer, Vienna, 1999.
- [122] P. J. Benckendorff, P. J. Sheldon, and D. R. Fesenmaier, "Tourism information technology: Second edition," *Tourism Information Technology: Second Edition*. Oxford: CAB International, pp. 1–368, 2014.
- [123] D. R. Fesenmaier, K. W. Wöber, and H. Wertner, "Destination recommendation systems behavioural foundations and applications." Cambridge: CAB International, p. 347, 2006.
- [124] C. Lamsfus, W. Dan, A. Alzua-Sorzabal, and Z. Xiang, "Going mobile: defining context for on-the-go travelers.," *J. Travel Res.*, vol. 54, no. 6, p. 691-701, 2015.
- [125] A. Venturini and F. Ricci, "Applying Trip@dvice recommendation technology to www.visiteurope.com," *Front. Artif. Intell. Appl.*, vol. 141, pp. 607–611, 2006.
- [126] K. A. Achmad, L. E. Nugroho, A. Djunaedi, and Widyawan, "Smart City Model: a Literature Review," in *2018 10th International Conference on Information Technology and Electrical Engineering (ICITEE)*, 2018, pp. 488–493.
- [127] K. A. Achmad, L. E. Nugroho, A. Djunaedi, and Widyawan, "Smart City Readiness based on Smart City Council 's Readiness Framework," *Int. J. Electr. Comput. Eng.*, vol. 8, no. 1, pp. 271–279, 2018.
- [128] K. A. Achmad, L. E. Nugroho, A. Djunaedi, and Widyawan, "Smart City for Development: Towards a Conceptual Framework," in *2018 4th International Conference on Science and Technology (ICST)*, 2018, pp. 1–6.
- [129] M. Montaner, B. López, and J. L. de la Rosa, "A taxonomy of recommender agents on the internet," *Artif. Intell. Rev.*, vol. 19, no. 4, pp. 285–330, 2003.



- [130] J. Ben Schafer, D. Frankowski, J. Herlocker, and S. Sen, “Collaborative Filtering Recommender Systems,” *Adapt. Web Lect. Notes Comput. Sci.*, vol. 4321/2007, pp. 291–324, 2007.
- [131] A. K. Dey, G. D. Abowd, and D. Salber, “A conceptual framework and a toolkit for supporting the rapid prototyping of context-aware applications,” *Human-Computer Interaction*. pp. 97–166, 2001.
- [132] S. Stabb *et al.*, “Intelligent systems for tourism,” *IEEE Intelligent Systems*. pp. 53–66, 2002.
- [133] K. Verbert *et al.*, “Context-Aware Recommender Systems for Learning: A Survey and Future Challenges,” *IEEE Trans. Learn. Technol.*, vol. 5, no. 4, pp. 318–335, Oct. 2012.
- [134] F. Ricci, L. Rokach, and B. Shapira, *Recommender Systems Handbook-Second Edition*. Boston, MA: Springer US, 2015.
- [135] K. A. Achmad, L. E. Nugroho, A. Djunaedi, and Widyawan, “Context Based- Tourism Recommender System: Towards Tourists’ Context-Sensitive Preference Conceptual Model,” in *2018 4th International Conference on Science and Technology (ICST)*, 2018, pp. 1–6.
- [136] X. Li, M. Eckert, J.-F. Martinez, and G. Rubio, “Context Aware Middleware Architectures: Survey and Challenges,” *Sensors*, vol. 15, no. 8, pp. 20570–20607, Aug. 2015.
- [137] M. Satyanarayanan, “Pervasive computing: vision and challenges,” *IEEE Pers. Commun.*, vol. 8, no. 4, pp. 10–17, 2001.
- [138] P. Brusilovsky and E. Millán, “User Models for Adaptive Hypermedia and Adaptive Educational Systems,” in *The Adaptive Web*, Berlin, Heidelberg: Springer Berlin Heidelberg, 2007, pp. 3–53.
- [139] S. Gauch, M. Speretta, A. Chandramouli, and A. Micarelli, “User Profiles for Personalized Information Access,” in *The Adaptive Web*, Berlin, Heidelberg: Springer Berlin Heidelberg, 2007, pp. 54–89.
- [140] J. Trajkova and S. Gauch, “Improving ontology-based user profiles,” in *Proceedings of RIAO*, 2004, pp. 380–389.
- [141] S. Dumais, E. Cutrell, J. Cadiz, G. Jancke, R. Sarin, and D. C. Robbins, “Stuff I’ve seen: a system for personal information retrieval and re-use,” in *Proceedings of the 26th annual international ACM SIGIR conference on Research and development in informaion retrieval - SIGIR ’03*, 2003, p. 72.
- [142] G. Adomavicius, B. Mobasher, F. Ricci, and A. Tuzhilin, “Context-Aware Recommender Systems,” *IA Magazine*, pp. 67–80, 2011.
- [143] J. Borràs, A. Moreno, and A. Valls, “Intelligent tourism recommender systems: A survey,” *Expert Syst. Appl.*, vol. 41, no. 16, pp. 7370–7389, Nov. 2014.



- [144] K. Meehan, T. Lunney, K. Curran, and A. McCaughey, “Context-aware intelligent recommendation system for tourism,” in *2013 IEEE International Conference on Pervasive Computing and Communications Workshops, PerCom Workshops 2013*, 2013, no. March, pp. 328–331.
- [145] L. Šikšnys and T. B. Pedersen, “Prescriptive Analytics,” in *Encyclopedia of Database Systems*, New York, NY: Springer New York, 2016, pp. 1–2.
- [146] J. Hagerty, “2017 Planning Guide for Data and Analytics,” *Gartner - Technical Professional Advice*, no. October 2016. pp. 1–27, 2016.
- [147] C. Rodríguez-hernández, S. Ilarri, R. Hermoso, and R. Trillo-lado, “DataGenCARS : A generator of synthetic data for the evaluation of context-aware recommendation systems,” *Pervasive Mob. Comput.*, vol. 38, pp. 516–541, 2017.
- [148] B. Vargas-govea, G. González-serna, and R. Ponce-medellín, “Effects of relevant contextual features in the performance of a restaurant recommender system,” in *3rd Workshop on Context-Aware Recommender Systems 2011, CARS 2011 - In Conjunction with the 5th ACM Conference on Recommender Systems, RecSys 2011*, 2011, no. May 2014.
- [149] D. F. Nettleton, “A synthetic data generator for online social network graphs,” *Soc. Netw. Anal. Min.*, vol. 6, no. 44, 2016.
- [150] M. Pasinato, C. E. Mello, M.-A. Aaufaure, and G. Zimbrão, “Generating Synthetic Data for Context-Aware Recommender Systems,” in *2013 BRICS Congress on Computational Intelligence & 11th Brazilian Congress on Computational Intelligence*, 2013.
- [151] V. Bolón-Canedo, N. Sánchez-Marroño, and A. Alonso-Betanzos, “A review of feature selection methods on synthetic data,” *Knowl. Inf. Syst.*, vol. 34, no. 3, 2013.
- [152] J. Han, M. Kamber, and J. Pei, *Data Mining: Concepts and Techniques*, 3rd editio. Elsevier Science & Technology, 2017.
- [153] Y. Zheng, R. Burke, and B. Mobasher, “Splitting approaches for context-aware recommendation,” in *Proceedings of the 29th Annual ACM Symposium on Applied Computing - SAC '14*, 2014, pp. 274–279.
- [154] M. Sokolova and G. Lapalme, “A systematic analysis of performance measures for classification tasks,” *Inf. Process. Manag.*, vol. 45, no. 4, pp. 427–437, 2009.
- [155] L. E. Nugroho, “Context-awareness: Connecting computing with its environment,” *ICITACEE 2015 - 2nd Int. Conf. Inf. Technol. Comput. Electr. Eng. Green Technol. Strength. Inf. Technol. Electr. Comput. Eng. Implementation, Proc.*, pp. 3–7, 2016.
- [156] K. A. Achmad, L. E. Nugroho, A. Djunaedi, and Widyawan, “Tourism contextual information for recommender system,” in *2017 7th International*



*Annual Engineering Seminar (InAES)*, 2017, pp. 1–6.

- [157] G. Adomavicius and A. Tuzhilin, “Context-Aware Recommender Systems,” in *Recommender Systems Handbook*, Second Edi., Boston, MA: Springer US, 2015, pp. 191–226.
- [158] J. Bao, Y. Zheng, D. Wilkie, and M. Mokbel, “Recommendations in location-based social networks: a survey,” *Geoinformatica*, vol. 19, no. 3, pp. 525–565, 2015.
- [159] S. Wanhill, “Public Sector and Policy,” in *Tourism Principles and Practice*, Third., London: Pearson Education Limited, 2005, pp. 502–540.
- [160] World Tourism Organization, “UNWTO Annual Report 2014,” Madrid, 2015.
- [161] UNWTO, *Sustainable Tourism for Development Guidebook: Enhancing capacities for Sustainable Tourism for Development in Developing Countries*. Madrid (Spain): World Tourism Organization (UNWTO), 2013.
- [162] W. Wattanacharoensil, “Tourism Curriculum in a Global Perspective: Past, Present, and Future,” *Int. Educ. Stud.*, vol. 7, no. 1, pp. 9–20, 2013.
- [163] K. A. Achmad, L. E. Nugroho, A. Djunaedi, and Widyawan, “Linking multidimensional context to support tourism recommender system,” in *2017 3rd International Conference on Science and Technology - Computer (ICST)*, 2017, pp. 76–81.



## LAMPIRAN

### Glosarium

Yang dimaksud dengan istilah-istilah yang digunakan dalam penelitian ini adalah.

1. Sistem rekomendasi (*recommender system*) adalah pendekatan, model, teknik, alat, atau perangkat lunak untuk memberikan personalisasi rekomendasi produk barang/jasa (item) kepada pengguna (*user*) tertentu.
2. Sistem rekomendasi berbasis konten (*content-based recommender system*) adalah pendekatan, model, teknik, alat, atau perangkat lunak untuk memberikan personalisasi rekomendasi produk barang/jasa (item) kepada pengguna (*user*) tertentu berdasarkan kemiripan produk barang/jasa (item) yang dicari, dibeli, dan/atau dirating.
3. Sistem rekomendasi berbasis pemfilteran kolaboratif (*collaborative filtering-based recommender system*) adalah pendekatan, model, teknik, alat, atau perangkat lunak untuk memberikan personalisasi rekomendasi produk barang/jasa (item) kepada pengguna (*user*) tertentu berdasarkan kemiripan interaksi pengguna (*user*) dalam mencari, membeli, dan/atau merating produk barang/jasa (item).
4. Sistem rekomendasi hibrida (*hybrid recommender system*) adalah pendekatan, model, teknik, alat, atau perangkat lunak untuk memberikan personalisasi rekomendasi produk barang/jasa (item) kepada pengguna (*user*) tertentu berdasarkan kemiripan produk barang/jasa (item) dan kemiripan interaksi pengguna (*user*).
5. Sistem rekomendasi berbasis konteks (*context aware-based recommender system*) adalah pendekatan, model, teknik, alat, atau perangkat lunak untuk memberikan personalisasi rekomendasi produk barang/jasa (item) kepada pengguna (*user*) tertentu berdasarkan informasi kontekstual.
6. Sistem rekomendasi berbasis konteks (media) sosial (*social context-based recommender system*) adalah pendekatan, model, teknik, alat, atau perangkat lunak untuk memberikan personalisasi rekomendasi produk barang/jasa (item) kepada pengguna (*user*) tertentu berdasarkan informasi kontekstual (media) sosial.
7. Sistem rekomendasi berbasis konteks pengguna (*user context-based recommender system*) adalah pendekatan, model, teknik, alat, atau perangkat lunak untuk memberikan personalisasi rekomendasi produk barang/jasa (item) kepada pengguna (*user*) tertentu berdasarkan informasi kontekstual pengguna (*user*).



8. Model rekomendasi berbasis konteks sosio-pengguna (*socio-user context-based recommendation model*) adalah representasi grafis atau matematis berdasarkan konsep, hubungan, struktur, sistem, dan aspek untuk memberikan personalisasi rekomendasi produk barang/jasa (item) kepada pengguna (*user*) tertentu berdasarkan informasi kontekstual (media) sosial dan pengguna (*user*).
9. Model rekomendasi destinasi pariwisata berbasis konteks sosio-pengguna (*socio-user context-based tourism destination recommendation model*) adalah representasi grafis atau matematis berdasarkan konsep, hubungan, struktur, sistem, dan aspek untuk memberikan personalisasi rekomendasi destinasi pariwisata kepada wisatawan tertentu berdasarkan informasi kontekstual (media) sosial dan informasi kontekstual wisatawan (pengguna).
10. Saran konteks (*context suggestion*) adalah pendekatan, model, teknik, alat, atau perangkat lunak untuk menyarankan konteks yang sesuai preferensi pengguna (*user*) berdasarkan produk barang/jasa (item) yang direkomendasikan.
11. Analisis prediktif (*predictive analytics*) adalah analisis data (*data analytics*) untuk memprediksi rekomendasi produk barang/jasa (item).
12. Analisis preskriptif (*prescriptive analytics*) adalah analisis data (*data analytics*) untuk menyarankan (meresepkan) pilihan keputusan dan/atau tindakan terbaik berdasarkan prediksi rekomendasi produk barang/jasa (item).
13. *Cold start problem* adalah potensi masalah sistem rekomendasi dalam memberikan personalisasi rekomendasi produk barang/jasa (item) terjadi ketika sistem rekomendasi berinteraksi dengan pengguna (*user*) baru dan/atau produk barang/jasa (item) baru ditambahkan ke katalog sistem rekomendasi.
14. *New tourist (user) problem* adalah potensi masalah sistem rekomendasi dalam memberikan personalisasi rekomendasi destinasi pariwisata (item) terjadi ketika sistem rekomendasi berinteraksi dengan wisatawan (pengguna) yang baru.
15. *New tourism destination (item) problem* adalah potensi masalah sistem rekomendasi dalam memberikan personalisasi rekomendasi destinasi pariwisata (item) terjadi ketika destinasi pariwisata (item) baru ditambahkan ke katalog sistem rekomendasi.
16. *Limited content analysis* adalah potensi masalah dalam memberikan personalisasi rekomendasi produk barang/jasa (item) terjadi ketika sistem rekomendasi memiliki informasi produk barang/jasa (item) kurang lengkap.
17. *Overspecialization* adalah potensi masalah dalam memberikan personalisasi rekomendasi produk barang/jasa (item) terjadi ketika sistem rekomendasi memiliki ketersediaan produk barang/jasa (item) yang terbatas.



18. *Sparseness* adalah potensi masalah dalam memberikan personalisasi rekomendasi produk barang/jasa (item) terjadi ketika sistem rekomendasi kekurangan data katalog produk barang/jasa (item) dan keengganan pengguna (*user*) merating produk barang/jasa (item) tersebut.
19. *Scalability* adalah potensi masalah dalam memberikan personalisasi rekomendasi produk barang/jasa (item) terjadi ketika sistem rekomendasi mengolah data produk barang/jasa (item) dalam skala besar.
20. *First-rater* adalah potensi masalah dalam memberikan personalisasi rekomendasi produk barang/jasa (item) terjadi ketika destinasi pariwisata (item) baru ditambahkan ke katalog sistem rekomendasi diberikan rating minim oleh pengguna (*user*).
21. *Grey sheep problem* adalah potensi masalah dalam memberikan personalisasi rekomendasi produk barang/jasa (item) terjadi ketika kelompok pengguna (*user*) ada yang setuju atau tidak setuju dengan preferensi mayoritas pengguna (*user*).