













































- [48] Hegde V, Parreira JX, Hauswirth M. Semantic tagging of places based on user interest profiles from online social networks. In: Proc. of the European Conf. on Information Retrieval. Berlin, Heidelberg: Springer-Verlag, 2013. 218–229.
- [49] Lian D, Xie X. Learning location naming from user check-in histories. In: Proc. of the 19th ACM SIGSPATIAL Int'l Conf on Advances in Geographic Information Systems. ACM, 2011. 112–121.
- [50] Ye M, Shou D, Lee WC, *et al.* On the semantic annotation of places in location-based social networks. In: Proc. of the 17th ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2011. 520–528.
- [51] Sarda S, Eickhoff C, Hofmann T. Semantic place descriptors for classification and map discovery. arXiv Preprint arXiv:1601.05952, 2016.
- [52] Bhattacharya T, Kulik L, Bailey J. Automatically recognizing places of interest from unreliable GPS data using spatio-temporal density estimation and line intersections. Pervasive and Mobile Computing, 2015,19:86–107.
- [53] Vu DD, Shin WY. Low-Complexity detection of POI boundaries using geo-tagged tweets: A geographic proximity based approach. In: Proc. of the 8th ACM SIGSPATIAL Int'l Workshop on Location-Based Social Networks. ACM, 2015.
- [54] Yuan J, Zheng Y, Xie X. Discovering regions of different functions in a city using human mobility and POIs. In: Proc. of the 18th ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2012. 186–194.
- [55] Noulas A, Scellato S, Mascolo C, *et al.* Exploiting semantic annotations for clustering geographic areas and users in location-based social networks. The Social Mobile Web, 2011,11:2.
- [56] Lichman M, Smyth P. Modeling human location data with mixtures of kernel densities. In: Proc. of the 20th ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2014. 35–44.
- [57] Lloyd A, Cheshire J. Deriving retail centre locations and catchments from geo-tagged Twitter data. Computers, Environment and Urban Systems, 2017,61:108–118.
- [58] Zhang C, Zhang K, Yuan Q, *et al.* Regions, periods, activities: Uncovering urban dynamics via cross-modal representation learning. In: Proc. of the 26th Int'l Conf. on World Wide Web. Int'l World Wide Web Conferences Steering Committee, 2017. 361–370.
- [59] Imamichi T, Osogami T, Raymond R. Truncating shortest path search for efficient map-matching. In: Proc. of the 25th Int'l Joint Conf. on Artificial Intelligence (IJCAI 2016). 2016. 589–595
- [60] Li Y, Su H, Demiryurek U, *et al.* PerNav: A route summarization framework for personalized navigation. In: Proc. of the 2016 ACM SIGMOD Int'l Conf. on Management of Data. 2016. 2125–2128.
- [61] Dai J, Yang B, Guo C, *et al.* Path cost distribution estimation using trajectory data. Proc. of the VLDB Endowment, 2016,10(3): 85–96.
- [62] Hung CC, Peng WC, Lee WC. Clustering and aggregating clues of trajectories for mining trajectory patterns and routes. The VLDB Journal, 2015,24(2):169–192.
- [63] Evans MR, Oliver D, Shekhar S, *et al.* Summarizing trajectories into  $k$ -primary corridors: A summary of results. In: Proc. of the 20th Int'l Conf. on Advances in Geographic Information Systems. ACM, 2012. 454–457.
- [64] Blei DM, Lafferty JD. Dynamic topic models. In: Proc. of the 23rd Int'l Conf. on Machine Learning. ACM, 2006. 113–120.
- [65] Blei DM, Ng AY, Jordan MI. Latent Dirichlet allocation. Journal of Machine Learning Research, 2003,3:993–1022.
- [66] Wang X, McCallum A. Topics over time: A non-Markov continuous-time model of topical trends. In: Proc. of the 12th ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2006. 424–433.
- [67] Wang C, Wang J, Xie X, *et al.* Mining geographic knowledge using location aware topic model. In: Proc. of the 4th ACM Workshop on Geographical Information Retrieval. ACM, 2007. 65–70.
- [68] Yin Z, Cao L, Han J, *et al.* Geographical topic discovery and comparison. In: Proc. of the 20th Int'l Conf. on World Wide Web. ACM, 2011. 247–256.
- [69] Hong L, Ahmed A, Gurumurthy S, *et al.* Discovering geographical topics in the twitter stream. In: Proc. of the 21st Int'l Conf. on World Wide Web. ACM, 2012. 769–778.
- [70] Eisenstein J, O'Connor B, Smith NA, *et al.* A latent variable model for geographic lexical variation. In: Proc. of the 2010 Conf. on Empirical Methods in Natural Language Processing. Association for Computational Linguistics, 2010. 1277–1287.
- [71] Hu B, Ester M. Spatial topic modeling in online social media for location recommendation. In: Proc. of the 7th ACM Conf. on Recommender Systems. ACM, 2013. 25–32.

- [72] Ahmed A, Hong L, Smola AJ. Hierarchical geographical modeling of user locations from social media posts. In: Proc. of the 22nd Int'l Conf. on World Wide Web. ACM, 2013. 25–36.
- [73] Liu Y, Ester M, Hu B, et al. Spatio-Temporal topic models for check-in data. In: Proc. of the 2015 IEEE Int'l Conf. on Data Mining (ICDM). IEEE, 2015. 889–894.
- [74] Mei Q, Liu C, Su H, et al. A probabilistic approach to spatiotemporal theme pattern mining on weblogs. In: Proc. of the 15th Int'l Conf. on World Wide Web. ACM, 2006. 533–542.
- [75] Yuan Q, Cong G, Ma Z, et al. Who, where, when and what: Discover spatio-temporal topics for twitter users. In: Proc. of the 19th ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2013. 605–613.
- [76] Hu B, Jamali M, Ester M. Spatio-Temporal topic modeling in mobile social media for location recommendation. In: Proc. of the 13th IEEE Int'l Conf. on Data Mining. IEEE, 2013. 1073–1078.
- [77] Agrawal R, Srikant R. Mining sequential patterns. In: Proc. of the 11th Int'l Conf. on Data Engineering. IEEE, 1995. 3–14.
- [78] Tsoukatos II, Gunopoulos D. Efficient mining of spatiotemporal patterns. In: Proc. of the Int'l Symp. on Spatial and Temporal Databases. Berlin, Heidelberg: Springer-Verlag, 2001. 425–442.
- [79] Wang J, Hsu W, Lee ML. Flowminer: Finding flow patterns in spatio-temporal databases. In: Proc. of the 16th IEEE Int'l Conf. on Tools with Artificial Intelligence. IEEE, 2004. 14–21.
- [80] Cao H, Mamoulis N, Cheung DW. Mining frequent spatio-temporal sequential patterns. In: Proc. of the 5th IEEE Int'l Conf. on Data Mining (ICDM 2005). IEEE, 2005. 8.
- [81] Alvares LO, Bogorny V, Kuijpers B, et al. Towards semantic trajectory knowledge discovery. Data Mining and Knowledge Discovery, 2007.
- [82] Ying JJC, Lee WC, Weng TC, et al. Semantic trajectory mining for location prediction. In: Proc. of the 19th ACM SIGSPATIAL Int'l Conf. on Advances in Geographic Information Systems. ACM, 2011. 34–43.
- [83] Chen CC, Kuo CH, Peng WC. Mining spatial-temporal semantic trajectory patterns from raw trajectories. In: Proc. of the 2015 IEEE Int'l Conf. on Data Mining Workshop (ICDMW). IEEE, 2015. 1019–1024.
- [84] Zhang C, Han J, Shou L, et al. Splitter: Mining fine-grained sequential patterns in semantic trajectories. Proc. of the VLDB Endowment, 2014,7(9):769–780.
- [85] Zhang C, Zheng Y, Ma X, et al. Assembler: Efficient discovery of spatial co-evolving patterns in massive geo-sensory data. In: Proc. of the 21st ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2015. 1415–1424.
- [86] Li Z, Ding B, Han J, et al. Mining periodic behaviors for moving objects. In: Proc. of the 16th ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2010. 1099–1108.
- [87] Li Z, Wang J, Han J. ePeriodicity: Mining event periodicity from incomplete observations. IEEE Trans. on Knowledge and Data Engineering, 2015,27(5):1219–1232.
- [88] Jindal T, Giridhar P, Tang LA, et al. Spatiotemporal periodical pattern mining in traffic data. In: Proc. of the 2nd ACM SIGKDD Int'l Workshop on Urban Computing. ACM, 2013. 11.
- [89] Zarezade A, Jafarzadeh S, Rabiee HR. Spatio-Temporal modeling of check-ins in location-based social networks. arXiv Preprint arXiv:1611.07710, 2016.
- [90] Chen L, Özsü MT, Oria V. Robust and fast similarity search for moving object trajectories. In: Proc. of the 2005 ACM SIGMOD Int'l Conf. on Management of Data. ACM, 2005. 491–502.
- [91] Berndt DJ, Clifford J. Using dynamic time warping to find patterns in time series. In: Proc. of the KDD Workshop. 1994,10(16): 359–370.
- [92] Vlachos M, Kollios G, Gunopoulos D. Discovering similar multidimensional trajectories. In: Proc. of the 18th Int'l Conf. on Data Engineering. IEEE, 2002. 673–684.
- [93] Chen J, Wang R, Liu L, et al. Clustering of trajectories based on Hausdorff distance. In: Proc. of the 2011 Int'l Conf. on Electronics, Communications and Control (ICECC). IEEE, 2011. 1940–1944.
- [94] Yuan G, Sun P, Zhao J, et al. A review of moving object trajectory clustering algorithms. Artificial Intelligence Review, 2016, 1–22.

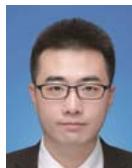
- [95] da Silva TLC, Zeitouni K, de Macêdo JAF, *et al.* A framework for online mobility pattern discovery from trajectory data streams. In: Proc. of the 17th IEEE Int'l Conf. on Mobile Data Management (MDM). IEEE, 2016,1:365–368.
- [96] Lee JG, Han J, Whang KY. Trajectory clustering: A partition-and-group framework. In: Proc. of the 2007 ACM SIGMOD Int'l Conf. on Management of Data. ACM, 2007. 593–604.
- [97] Kim Y, Han J, Yuan C. TOPTRAC: Topical trajectory pattern mining. In: Proc. of the 21st ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2015. 587–596.
- [98] Zhang C, Zhang K, Yuan Q, *et al.* GMove: Group-Level mobility modeling using geo-tagged social media. In: Proc. of the 22nd ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2016.
- [99] Yin H, Zhou X, Shao Y, *et al.* Joint modeling of user check-in behaviors for point-of-interest recommendation. In: Proc. of the 24th ACM Int'l Conf. on Information and Knowledge Management. ACM, 2015. 1631–1640.
- [100] Cho E, Myers SA, Leskovec J. Friendship and mobility: User movement in location-based social networks. In: Proc. of the 17th ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2011. 1082–1090.
- [101] Zhang C, *et al.* Spatiotemporal activity modeling under data scarcity: A graph-regularized cross-modal embedding approach. In: Proc. of the AAAI. 2018.
- [102] Zhang C, Zhang K, Yuan Q, *et al.* ReAct: Online multimodal embedding for recency-aware spatiotemporal activity modeling. In: Proc. of the 40th Int'l ACM SIGIR Conf. on Research and Development in Information Retrieval. ACM, 2017. 245–254.
- [103] Chen Q, Song X, Yamada H, *et al.* Learning deep representation from big and heterogeneous data for traffic accident inference. In: Proc. of the 30th AAAI Conf. on Artificial Intelligence. 2016.
- [104] Song X, Kanasugi H, Shibasaki R. Deeptransport: Prediction and simulation of human mobility and transportation mode at a citywide level. In: Proc. of the IJCAI. 2016.
- [105] Higgs B, Abbas M. Segmentation and clustering of car-following behavior: Recognition of driving patterns. IEEE Trans. on Intelligent Transportation Systems, 2015,16(1):81–90.
- [106] Liu S, Ni LM, Krishnan R. Fraud detection from taxis' driving behaviors. IEEE Trans. on Vehicular Technology, 2014,63(1):464–472.
- [107] Yuan Q, Cong G, Zhao K, *et al.* Who, where, when, and what: A nonparametric bayesian approach to context-aware recommendation and search for twitter users. ACM Trans. on Information Systems (TOIS), 2015,33(1):2.
- [108] Wang J, Li M, Han J, *et al.* Modeling check-in preferences with multidimensional knowledge: A minimax entropy approach. In: Proc. of the 9th ACM Int'l Conf. on Web Search and Data Mining. ACM, 2016. 297–306.
- [109] Zhang D, Guo L, Nie L, Shao J, Wu S, Shen HT. Targeted advertising in public transportation systems with quantitative evaluation. ACM TOIS, 2017,35(3):20:1–20:29. [doi:10.1145/3003725]
- [110] Guo L, Zhang D, Wu H, Cui B, Tan KL. From raw footprints to personal interests: Bridging the semantic gap via trip intention aggregation. In: Proc. of the 33rd IEEE Int'l Conf. on Data Engineering (ICDE). IEEE, 2007. 123–126. [doi:10.1109/ICDE.2017.55]
- [111] Wu F, Li Z. Where did you go: Personalized annotation of mobility records. In: Proc. of the 25th ACM Int'l Conf. on Information and Knowledge Management. ACM, 2016. 589–598.
- [112] Zhao K, Liu Y, Yuan Q, *et al.* Towards personalized maps: Mining user preferences from geo-textual data. Proc. of the VLDB Endowment, 2016,9(13):1545–1548.
- [113] Wang W, Yin H, Sadiq S, *et al.* SPORE: A sequential personalized spatial item recommender system. In: Proc. of the 32nd IEEE Int'l Conf. on Data Engineering (ICDE). IEEE, 2016. 954–965.
- [114] Zhong Y, Yuan N J, Zhong W, *et al.* You are where you go: Inferring demographic attributes from location check-ins. In: Proc. of the 8th ACM Int'l Conf. on Web Search and Data Mining. ACM, 2015. 295–304.
- [115] Cao W, Wu Z, Wang D, *et al.* Automatic user identification method across heterogeneous mobility data sources. In: Proc. of the 32nd IEEE Int'l Conf. on Data Engineering (ICDE). IEEE, 2016. 978–989.
- [116] Rossi L, Walker J, Musolesi M. Spatio-Temporal techniques for user identification by means of GPS mobility data. EPJ Data Science, 2015,4(1):1.

- [117] Rossi L, Williams M J, Stich C, *et al.* Privacy and the city: User identification and location semantics in location-based social networks. arXiv Preprint arXiv:1503.06499, 2015.
- [118] Du N, Dai H, Trivedi R, *et al.* Recurrent marked temporal point processes: Embedding event history to vector. In: Proc. of the 22nd ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2016. 1555–1564.
- [119] Van Canneyt S, Schockaert S, Dhoedt B. Categorizing events using spatio-temporal and user features from Flickr. Information Sciences, 2016,328:76–96.
- [120] Krumm J, Horvitz E. Eyewitness: Identifying local events via space-time signals in twitter feeds. In: Proc. of the 23rd SIGSPATIAL Int'l Conf. on Advances in Geographic Information Systems. ACM, 2015. 20.
- [121] Foley J, Bendersky M, Josifovski V. Learning to extract local events from the Web. In: Proc. of the 38th Int'l ACM SIGIR Conf. on Research and Development in Information Retrieval. ACM, 2015. 423–432.
- [122] Liu Y, Zhou B, Chen F, *et al.* Graph topic scan statistic for spatial event detection. In: Proc. of the 25th ACM Int'l Conf. on Information and Knowledge Management. ACM, 2016. 489–498.
- [123] Liang Y, Caverlee J, Cao C. A noise-filtering approach for spatio-temporal event detection in social media. In: Proc. of the European Conf. on Information Retrieval. Springer Int'l Publishing, 2015. 233–244.
- [124] Hristova D, Liben-Nowell D, Noulas A, *et al.* If you've got the money, I've got the time: Spatio-Temporal footprints of spending at sports events on foursquare. In: Proc. of the 10th Int'l AAAI Conf. on Web and Social Media. 2016.
- [125] Quezada M, Peña-Araya V, Poblete B. Location-Aware model for news events in social media. In: Proc. of the 38th Int'l ACM SIGIR Conf. on Research and Development in Information Retrieval. ACM, 2015. 935–938.
- [126] Zhang W, Qi G, Pan G, *et al.* City-Scale social event detection and evaluation with taxi traces. ACM Trans. on Intelligent Systems and Technology (TIST), 2015,6(3):40.
- [127] Ouyang RW, Srivastava A, Prabahar P, *et al.* If you see something, swipe towards it: Crowdsourced event localization using smartphones. In: Proc. of the 2013 ACM Int'l Joint Conf. on Pervasive and Ubiquitous Computing. ACM, 2013. 23–32.
- [128] Ouyang RW, Srivastava M, Toniolo A, *et al.* Truth discovery in crowdsourced detection of spatial events. IEEE Trans. on Knowledge and Data Engineering, 2016,28(4):1047–1060.
- [129] Patroumpas K, Artikis A, Katzouris N, *et al.* Event recognition for maritime surveillance. In: Proc. of the EDBT. 2015. 629–640.
- [130] Zhang C, Zhou G, Yuan Q, *et al.* GeoBurst: Real-Time local event detection in geo-tagged tweet streams. In: Proc. of the 39th Int'l ACM SIGIR Conf. on Research and Development in Information Retrieval. ACM, 2016. 513–522.
- [131] Zhang C, Lei D, Yuan Q, *et al.* GeoBurst+: Effective and real-time local event detection in geo-tagged tweet streams. ACM Trans. on Intelligent Systems and Technology (TIST), 2018,9(3):34.
- [132] Abdelhaq H, Sengstock C, Gertz M. Eventweet: Online localized event detection from twitter. Proc. of the VLDB Endowment, 2013,6(12):1326–1329.
- [133] Walther M, Kaisser M. Geo-Spatial event detection in the twitter stream. In: Proc. of the European Conf. on Information Retrieval. Berlin, Heidelberg: Springer-Verlag, 2013. 356–367.
- [134] Maurya A, Murray K, Liu Y, *et al.* Semantic scan: Detecting subtle, spatially localized events in text streams. arXiv Preprint arXiv:1602.04393, 2016.
- [135] Unankard S, Li X, Sharaf MA. Emerging event detection in social networks with location sensitivity. World Wide Web, 2015,18(5): 1393–1417.
- [136] Watanabe K, Ochi M, Okabe M, *et al.* Jasmine: A real-time local-event detection system based on geolocation information propagated to microblogs. In: Proc. of the 20th ACM Int'l Conf. on Information and Knowledge Management. ACM, 2011. 2541–2544.
- [137] Zhang C, Liu L, Lei D, *et al.* Triovecevent: Embedding-Based online local event detection in geo-tagged tweet streams. In: Proc. of the 23rd ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2017. 595–604.
- [138] Feng W, Zhang C, Zhang W, *et al.* STREAMCUBE: Hierarchical spatio-temporal hashtag clustering for event exploration over the twitter stream. In: Proc. of the 31st IEEE Int'l Conf. on Data Engineering. IEEE, 2015. 1561–1572.
- [139] Yu Y, Chen X. A survey of point-of-interest recommendation in location-based social networks. In: Proc. of the Workshops at the 29th AAAI Conf. on Artificial Intelligence. 2015.

- [140] Liu X, Liu Y, Li X. Exploring the context of locations for personalized location recommendations. In: Proc. of the 25th Int'l Joint Conf. on Artificial Intelligence (IJCAI 2016). 2016. 1188–1194.
- [141] Yin H, Zhou X, Cui B, et al. Adapting to user interest drift for poi recommendation. IEEE Trans. on Knowledge and Data Engineering, 2016,28(10):2566–2581.
- [142] Li H, Ge Y, Zhu H. Point-of-Interest recommendations: Learning potential check-ins from friends. In: Proc. of the 22nd ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2016. 975–984.
- [143] Liu Y, Liu C, Liu B, et al. Unified point-of-interest recommendation with temporal interval assessment. In: Proc. of the 22nd ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2016. 1015–1024.
- [144] Cheng C, Yang H, King I, et al. A unified point-of-interest recommendation framework in location-based social networks. ACM Trans. on Intelligent Systems and Technology (TIST), 2016,8(1):10.
- [145] Yin H, Zhou X, Shao Y, et al. Joint modeling of user check-in behaviors for point-of-interest recommendation. In: Proc. of the 24th ACM Int'l Conf. on Information and Knowledge Management. ACM, 2015. 1631–1640.
- [146] Chen X, Zeng Y, Cong G, et al. On information coverage for location category based point-of-interest recommendation. In: Proc. of the AAAI. 2015. 37–43.
- [147] Bagci H, Karagoz P. Context-Aware friend recommendation for location based social networks using random walk. In: Proc. of the 25th Int'l Conf. Companion on World Wide Web. Int'l World Wide Web Conferences Steering Committee, 2016. 531–536.
- [148] Wang Z, Liao J, Cao Q, et al. Friendbook: A semantic-based friend recommendation system for social networks. IEEE Trans. on Mobile Computing, 2015,14(3):538–551.
- [149] Quercia D, Lathia N, Calabrese F, et al. Recommending social events from mobile phone location data. In: Proc. of the 2010 IEEE Int'l Conf. on Data Mining. IEEE, 2010. 971–976.
- [150] Zhang W, Wang J. A collective Bayesian Poisson factorization model for cold-start local event recommendation. In: Proc. of the 21st ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2015. 1455–1464.
- [151] Ayhan S, Samet H. Aircraft trajectory prediction made easy with predictive analytics. In: Proc. of the 22nd ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2016. 421–434.
- [152] Hai NT, Nguyen HH, Thai-Nghe N. A mobility prediction model for location-based social networks. In: Proc. of the Asian Conf. on Intelligent Information and Database Systems. Berlin, Heidelberg: Springer-Verlag, 2016. 106–115.
- [153] Besse PC, Guillouet B, Loubes JM, et al. Destination prediction by trajectory distribution based model. arXiv Preprint arXiv:1605.03027, 2016.
- [154] Chen M, Liu Y, Yu X. Predicting next locations with object clustering and trajectory clustering. In: Proc. of the Pacific-Asia Conf. on Knowledge Discovery and Data Mining. Springer Int'l Publishing, 2015. 344–356.
- [155] Xue AY, Qi J, Xie X, et al. Solving the data sparsity problem in destination prediction. The VLDB Journal, 2015,24(2):219–243.
- [156] Wang Y, Yuan NJ, Lian D, et al. Regularity and conformity: Location prediction using heterogeneous mobility data. In: Proc. of the 21st ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2015. 1275–1284.
- [157] de Brébisson A, Simon É, Auvolat A, et al. Artificial neural networks applied to taxi destination prediction. arXiv Preprint arXiv:1508.00021, 2015.
- [158] Clements M, Serdyukov P, De Vries AP, et al. Using flickr geotags to predict user travel behavior. In: Proc. of the 33rd Int'l ACM SIGIR Conf. on Research and Development in Information Retrieval. ACM, 2010. 851–852.
- [159] Yin H, Hu Z, Zhou X, et al. Discovering interpretable geo-social communities for user behavior prediction. In: Proc. of the 32nd IEEE Int'l Conf. on Data Engineering (ICDE). IEEE, 2016. 942–953.
- [160] Zhao L, Ye J, Chen F, et al. Hierarchical incomplete multi-source feature learning for spatiotemporal event forecasting. In: Proc. of the 22nd ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2016. 805–814.
- [161] Zhao L, Chen F, Lu CT, et al. Spatiotemporal event forecasting in social media. In: Proc. of the SDM. 2015,15:963–971.
- [162] Zhao L, Sun Q, Ye J, et al. Multi-Task learning for spatio-temporal event forecasting. In: Proc. of the 21st ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining. ACM, 2015. 1503–1512.

**附中文参考文献:**

- [3] 刘大有,陈慧灵,齐红,杨博.时空数据挖掘研究进展.计算机研究与发展,2013,50(2):225–239.
- [4] 吉根林,赵斌.面向大数据的时空数据挖掘综述.南京师范大学学报:自然科学版,2014,37(1):1–7.
- [5] 郑宇.城市计算概述.武汉大学学报(信息科学版),2015,40(1):1–13.
- [7] 高强,张凤荔,王瑞锦,周帆.轨迹大数据:数据处理关键技术研究综述.软件学报,2017,28(4):959–992. <http://www.jos.org.cn/1000-9825/5143.htm> [doi: 10.13328/j.cnki.jos.005143]
- [23] 童咏昕,袁野,成雨蓉,陈雷,王国仁.时空众包数据管理技术研究综述.软件学报,2017,28(1):35–58. <http://www.jos.org.cn/1000-9825/5140.htm> [doi: 10.13328/j.cnki.jos.005140]



姚迪(1990—),男,河南许昌人,博士,CCF 学生会员,主要研究领域为数据挖掘,机器学习.



张超(1988—),男,博士,助理研究员,主要研究领域为 data mining,machine learning.



黄建辉(1977—),男,博士,高级工程师,主要研究领域为移动机会网络,大数据应用.



陈越新(1983—),男,博士,工程师,主要研究领域为计算机网络,大数据应用技术.



毕经平(1974—),女,博士,研究员,博士生导师,CCF 高级会员,主要研究领域为计算机网络,数据处理.