LONG CHEN

Research Interests

I am broadly interested in machine learning and deep learning as well as their practical applications. My research focuses on information retrieval and fusion of large-scale heterogeneous data derived from online sources. My previous research includes traffic forecasting, question answering, user engagement modelling, and text mining. My passion lies in innovative research for solving real-world problems with complex and large-scale data using my data mining research experience.

Personal Site: https://www.gla.ac.uk/schools/socialpolitical/staff/longchen/

Github: https://github.com/long4glasgow

Employment

Feb 2018–present Innovation Research Fellow (Line Manager: Dr JinhYun Hong)
Urban Big Data Center, Glasgow
Title: ***Social and economic implications of transport sharing and automation***

Feb 2015–Feb 2018 Research Assistant on EPSRC S4 Programme Grant (PI: Prof. Joemon Jose)
School of Computing Science, University of Glasgow
Keywords: **topic modelling, event detection, semantic web**

Aug 2014– Feb 2015 Intern (PI:Liam Ellis)
Wonga, London
Keywords: **scorecard, risk modelling**

Education

2009 – 2014 PhD School of Computing Science – Birkbeck, University of London
Supervisors: Dell Zhang and Mark Levene
Title: **Understanding and exploiting user intent in community question answering**

2006 – 2009 Master's degree in Computer Science, Central China Normal University

2002 – 2006 Bachelor's degree in Computer Science, Central China Normal University

Teaching

As part of my PhD and Research Fellow position, I have been a teaching assistant from 2013 until now in the following courses:

- Feb 2020– Feb 2021 **Programming Tools for Urban Analytics, University of Glasgow** (Lecture 9 Machine Learning and Deep learning, which is also available on Moodle)
- Feb 2017– Feb 2019 **Web Science, University of Glasgow (**Lecture 5, NoSQL**,** Lecture 7, Deep Learning**)**
- Feb 2013– Feb 2014 **Quantitative Method, University of London (**Lecture 8, Statistical Analysis Using SPSS**)**

COMPUTER EXPERTISE

- In-depth understanding of programming language such as Python (IPython Notebook), JAVA, R, C#, and C++
- In-depth understanding of statistical tools such as SPSS, Matlab, and Excel
- Skilled in SQL queries, MongoDB, VISUM, VISSIM

SELECTED PUBLICATIONS/CONFERENCES

Journal Articles

1. Long Chen., Thakuriah, P. (V.) and Ampountolas, K. (2021) Short-term prediction of demand for ride-hailing services: a deep learning approach. *Journal of Big Data Analytics in Transportation*, 3(2), pp. 175-195. (doi: 10.1007/s42421-021-00041-4)
2. Long Chen, Zhang, H., Jose, J. M. , Yu, H., Moshfeghi, Y. and Triantafillou, P. (2018) Topic detection and tracking on heterogeneous information. *Journal of Intelligent Information Systems*, 51(1), pp. 115-137. (doi: 10.1007/s10844-017-0487-y)
3. Yu, H.-T., Jatowt, A., Blanco, R., Joho, H., Jose, J. M., Long Chen and Yuan, F. (2018) Revisiting the cluster-based paradigm for implicit search result diversification. *Information Processing and Management*, 54(4), pp. 507-528. (doi: 10.1016/j.ipm.2018.03.003)
4. Long Chen., Jose, J. M. , Yu, H., Yuan, F. and Zhang, H. (2016) Probabilistic Topic Modelling with Semantic Graph. *Computer Science*, 9626, pp. 240-251. (doi: 10.1007/978-3-319-30671-1_18)

Conference Proceedings

1. Yu, H.-T., Jatowt, A., Joho, H., Jose, J. M. , Yang, X. and Long Chen,. (2019) WassRank: Listwise Document Ranking Using Optimal Transport Theory. *In: Twelfth ACM International Conference on Web Search and Data Mining, Melbourne, Australia*, 11-15 Feb 2019, pp. 24-32. ISBN 9781450359405 (doi:10.1145/3289600.3291006)
2. Long Chen, Yuan, F., Jose, J. M. and Zhang, W. (2018) Improving Negative Sampling for Word Representation Using Self-embedded Features. *In: The 11th International Conference on Web Searching and Data Mining (WSDM 2018), Los Angeles, CA, USA*, 05-09 Feb 2018, pp. 99-107. ISBN 9781450355810 (doi:10.1145/3159652.3159695)
3. Long Chen., Jose, J. M. , Yu, H. and Yuan, F. (2017) A Semantic Graph-Based Approach for Mining Common Topics From Multiple Asynchronous Text Streams. *In: 26th International World Wide Web Conference: WWW 2017, Perth, Australia, 3-7 Apr 2017*, pp. 1201-1209. ISBN 9781450349130 (doi:10.1145/3038912.3052630)
4. Yuan, F., Jose, J. M. , Guo, G., Long Chen, Yu, H. and Alkhawaldeh, R. S. (2017) Joint Geo-Spatial Preference and Pairwise Ranking for Point-of-Interest Recommendation. *In: 28th International Conference on Tools with Artificial Intelligence (ICTAI 2016), San Jose, CA, USA, 6-8 Nov 2016*, pp. 46-53. ISBN 9781509044597 (doi:10.1109/ICTAI.2016.0018)
5. Yuan, F., Guo, G., Jose, J. M. , Long Chen, Yu, H. and Zhang, W. (2017) BoostFM: Boosted Factorization Machines for Top-N Feature-based Recommendation. *In: IUI 2017: 22nd Annual Meeting of the Intelligent User Interfaces Community, Limassol, Cyprus, 13-16 March 2017*, pp. 45-54. ISBN 9781450343480 (doi:10.1145/3025171.3025211)
6. Yuan, F., Guo, G., Jose, J. M. , Long Chen, Yu, H. and Zhang, W. (2016) Optimizing Factorization Machines for Top-N Context-aware Recommendations. *In: 17th International Conference on Web Information Systems Engineering (WISE 2016), Shanghai, China, 7-10 Nov 2016*, pp. 278-293. ISBN 9783319487397 (doi:10.1007/978-3-319-48740-3_20)
7. Yuan, F., Guo, G., Jose, J. M. , Long Chen, Yu, H. and Zhang, W. (2016) LambdaFM: Learning Optimal Ranking with Factorization Machines Using Lambda Surrogates. *In: 25th ACM International Conference on Information and Knowledge Management (CIKM 2016), Indianapolis, IN, USA, 24-28 Oct 2016*, pp. 227-236. ISBN 9781450340731 (doi:10.1145/2983323.2983758)
8. Long Chen, Jose, J. M. , Yu, H., Yuan, F. and Zhang, D. (2016) A Semantic Graph based Topic Model for Question Retrieval in Community Question Answering. *In: Ninth ACM International Conference on Web Search and Data Mining, San Francisco, CA, USA, 22-25 Feb 2016, pp. 287-296*. ISBN 9781450337168 (doi:10.1145/2835776.2835809)
9. Fajie Yuan, Guibing Guo, Joemon M Jose, Long Chen and Haitao Yu. "Joint Geo-Spatial Preference and Pairwise Ranking for Point-of-Interest Recommendation" *In Proceedings of the IEEE International Conference on Tools with Artificial Intelligence* (ICTAI 2016, Best Student Paper Award)

10. Fajie Yuan, Guibing Guo, Joemon M Jose, Long Chen and Haitao Yu. "Optimizing Factorization Machines for Top-N Context-aware Recommendations" *In Proceedings of the 17th International Conference on Web Information System Engineering* (WISE 2016, Accept rate: 23%)

Book Chapters

1. Chen, L., Sun, Y. and Thakuriah, P. (2019) Modelling and Predicting Individual Salaries in United Kingdom with Graph Convolutional Network. In: Madureira, A. M., Abraham, A., Gandhi, N. and Varela, M. L. (eds.) *Hybrid Intelligent Systems*. Series: Advances in intelligent systems and computing (923). Springer: Cham, pp. 61-74. ISBN 9783030143466 (doi:10.1007/978-3-030-14347-3_7)

Submitted Journal Articles

1. Long Chen, Piyushimita Vonu Thakuriah, and Konstantinos Ampountolas. " Predicting the Crowd Size through Twitter Data Analysis" Submitted to *Journal of Information and Management.*

2. Long Chen, Piyushimita Vonu Thakuriah, and Konstantinos Ampountolas. "Understanding Bert's Attention in Covid Sentiment Analysis via DBpedia" Submitted to *Journal of Information Systems.*

3. Long Chen, Piyushimita Vonu Thakuriah, and Konstantinos Ampountolas. " *Learning the Semantic Embedding for Question Retrieval in Community Question Answering Platforms*" Submitted to *Journal of Web Semantics.*

4. Long Chen, Yashar Moshigihi, Peter Ttriantafillou. "SG-DE: A General Framework for Incorporating Semantic Graphs into Document Representation" Submitted to *Proceedings of the 31th International Conference Companion on World Wide Web*

Award

ESRC Fellowship (ESRC project PI, #ES/S001875/1)
U21 2020 Scholarship

- Conference Travel Grant (£1500)

Birkbeck 2013, Elite Scholarship

- Tuition fee waiver (£12000)

SIGIR 2013 Travel Grant

- Conference Travel Grant (£1000)

ECIR 2010 Travel Grant

- Conference Travel Grant (£500)