Chang Li

Education

Sep.2016–Present **Ph.D. student**, *Informatics Institute, University of Amsterdam*.
Supervisor: Prof. Dr. Maarten de Rijke
Research topic:
- Online learning to rank
- Multi-armed bandits
- Sparse Bayesian learning

Sep.2013–Jun.2016 **Master of Engineering**, *School of Computer Science, University of Science and Technology of China*.
Supervisor: Prof. Dr. Huanhuan ChenThesis: *Sparse Bayesian Feature Selection*

Sep.2009–Jul.2013 **Bachelor of Engineering**, *School of Computer Science, Tianjin University*.
Supervisor: Dr. Xin Wang
Graduation project: *Semantic Web Based Chinese Knowledge Summarization*

Experience

Jun.2019–Present **Research Intern**, *Bloomberg, New York, USA*.
Mentor: Dr. Haoyun Feng
Topic: Online learning to rank

Publications and Preprints

[1] **Chang Li**, Ilya Markov, Maarten de Rijke, and Masrour Zoghi. Mergedts: A method for effective large-scale online ranker evaluation. *ACM Transactions on Information Systems*, 2019. Accepted subject to major revisions. arXiv preprint arXiv:1812.04412.

[2] **Chang Li**, Branislav Kveton, Tor Lattimore, Ilya Markov, Maarten de Rijke, Csaba Szepesvari, and Masrour Zoghi. Bubblerank: Safe online learning to re-rank via implicit click feedback. In *UAI 2019: Conference on Uncertainty in Artificial Intelligence*, July 2019.

[3] **Chang Li** and Maarten de Rijke. Cascading non-stationary bandits: Online learning to rank in the non-stationary cascade model. In *IJCAI 2019: Twenty-Eighth International Joint Conference on Artificial Intelligence*, August 2019.

[4] Bingbing Jiang, **Chang Li**, Maarten de Rijke, Xin Yao, and Huanhuan Chen. Probabilistic feature selection and classification vector machine. *ACM Transactions on Knowledge Discovery from Data*, 13(2):Article 21, April 2019.

[5] **Chang Li**, Artem Grotov, Ilya Markov, and Maarten de Rijke. Online learning to rank with list-level feedback for image filtering. *arXiv preprint arXiv:1812.04910*, 2018.

[6] **Chang Li** and Maarten de Rijke. Incremental sparse Bayesian ordinal regression. *Neural Networks*, 106:294–302, 2018.

[7] **Chang Li** and Huanhuan Chen. Sparse Bayesian approach for feature selection. In *Pro-*

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ceedings of IEEE Symposium on Computational Intelligence in Big Data (CIBD), Orlando, FL, USA, December 9-12, pages 7–13, 2014.

Selected Research Topics

2017–present ***Bandits and ranking***.
Keywords: Dueling bandits, click models, upper confidence bound and Thompson sampling.
Bandits algorithms are widely used in sequential decision making and online learning. I proposed two types of bandit algorithms: one is about the large-scale dueling bandits, called MergeDTS; the other is about the safe online learning to (re-)rank via click feedback, called BubbleRank.

2013–2017 ***Sparse Bayesian learning***.
Keywords: Bayesian inference, Laplacian approximation, EM algorithm and ordinal regression.
Sparse Bayesian learning is a widely used learning framework. By incorporating different types of likelihoods, I proposed an ordinal regression algorithm, called ISBOR and a joint feature selection and classification algorithm, called PFCVM.

Teaching and Supervision

Teaching assistant

Spring 2018 Information Retrieval I (52041INR6Y), Dr. Evangelos Kanoulas, UvA.

Spring 2017 Statistical Reasoning (5062STRE6Y), Dr. Rein van den Boomgaard, UvA.

Student supervision

2018 Rick Bruins, MSc Data Science, UvA, master thesis, topic: *ICD-10 classification*.

2018 Ilse Lankhorst, MSc Data Science, UvA, master thesis, topic: *Predicting hospital cost from a machine learning perspective*.

Professional Service

Reviewer Foundations and Trends in Information Retrieval
IEEE Transactions on Neural Networks and Learning Systems
IEEE Transactions on Industrial Informatics

Miscellaneous

Programming languages Python (PyTorch), Matlab

Languages Chinese (native), English (working proficiency)

Hobbies Sports, travel, movies

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