

Chunqiu Zeng

Resume

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GitHub: <https://github.com/grandzeng>

Research Interests

Large Scale Data Mining; Temporal Data Mining; Recommender System; Advertising; Distributed Data Mining; Data Analysis

Education

- 2012-2016 **Ph.D. in Computer Science**, *Florida International University*, Miami, FL, USA.
GPA: 3.9. Research Area: Large-scale Data Mining, Event Mining, Distributed Data Mining. **Dissertation:** [Large Scale Data Mining for IT Service Management](#).
- 2006-2009 **M.S. in Computer Science**, *Sichuan University*, Chengdu, Sichuan, China.
GPA: 3.6. Research Area: Data Mining
- 2002-2006 **B.S. in Computer Science**, *Sichuan University*, Chengdu, Sichuan, China.
GPA: 3.4

Experience

Industry Experience

- Dec. 2016 – Present **Software Engineer**, *Ads Quality Team, Google*, Mountain View, CA, USA.
Working on native Ads format, report, with the purpose of leveraging machine learning and data mining techniques to improve the native Ads quality and providing uses with better Ads experience.
- Summer of 2015 **Intern**, *DoubleClick Search Reporting Team, Google*, Kirkland, WA, USA.
Leveraged some data mining and statistics techniques to conduct change impact analysis, with the purpose to identify the correlation between advertising changes and performance metrics. Constructed a flume pipeline for change impact analysis over large scale data.
- Summer of 2014 **Intern**, *VideoAds Format Team, Google*, Mountain View, CA, USA.
Built a tool to integrate multi-sources Ads time series data on YouTube video. Developed an integrated interface to facilitate the users for Ads time series data querying, analysis and visualization. Explored the correlation between time series to identify the factors in Ads format which contributes to skipping rate of Ads.
- Summer of 2013 **Intern**, *IBM T.J Watson Research Center*, New York, NY, USA.
Facilitated problem diagnosis, determination and auto-resolution in a complex IT environment by designing and implementing a hierarchical multi-label classifier to analyze the incident tickets data of IBM Tivoli Monitoring System.

2009.7.1-2012.1.1 **Senior Data Engineer**, *Data Warehouse Department*, **Alibaba Group**, Hangzhou, China.

- Designed and implemented the meta-data extraction and association rule mining algorithms for the *Metadata Mining System*, a system that leverages data mining techniques to discover the latent relationship of 10000+ database tables from the heterogeneous sources such as DB2, Oracle, Greenplum, etc.
- Designed and implemented the scheduling algorithm for the internal data analysis job scheduling system. The implemented algorithm is able to schedule 10000+ ETL jobs per day on top of a heterogeneous architecture consisting of DB2, RAC, Greenplum, Hadoop/Hive, etc.
- Designed and implemented a distributed system called *Data Highway* to facilitate the high-speed data transmission between the heterogeneous data sources including DB2, HDFS, SQLServer, MySQL, Greenplum, RAC.
- Designed and implemented the *Automatic Deployment System* that is able to automatically deploy hundreds of projects per day.

2007.8-2008.3 **Software Engineer Intern**, *MSGUI Group*, **Alcatel-Lucent**, Chengdu, China.

- Designed the conceptual, logical, and physical data model and implemented the data access interface for a network management system called MAPIM.
- Implemented the configuration module for a user graphic rendering service called GUI Server and the communication module between the GUI Server and the MAPIM.

Academic Experience

2012.1-Present **Research Assistant**, *Knowledge Discovery Research Group*, FIU, USA.

- Designed and implemented a Fast,Integrated,User-friendly system named FIU-Miner in support of running a number of data analysis tasks in distributed environment. FIU-Miner, a linearly extensible system, provides a user-friendly workflow to schedule data analysis tasks in full use of the available resources of distributed environment.[**online demo**]
- Leded the design and implementation of manufacturing data analysis platform. This platform provides an integrated suit of solutions to analyze manufacturing data, especially the product data of Plasma Display Panel. The platform shows the entire solution of the data analysis from the initial data exploration to the final knowledge extraction.
[**online demo**]
- Worked on the Business Continuity Information Network (abbr., BCIN) project, providing a web-based service where local businesses, county emergency management, and organizations that assist businesses can gather to share critical information and support continuity efforts before, during and after a disaster. My work mainly focused on applying data mining techniques to address the critical process optimization in disaster management.
[**online demo**]

Programming Skills

Languages: Java (proficient), Python (familiar), Javascript (familiar), C/C++ (familiar)

DB: Oracle, DB2, MySQL, MongoDB, PostgreSQL, HDFS, Hive, Big Table

Frameworks & Libraries: Apache Hadoop, Flume, Thrift, Protocol Buffer, Stubby, Mahout, jQuery

Tools: Git, SVN, make,

Book Chapter

1. Event Mining: Algorithms and Applications. Released by Chapman and Hall/CRC, September 2015. Chunqiu Zeng contributes to Chapter 4 (Pattern Discovery and Summarization Event Pattern Mining).
2. Event Mining: Algorithms and Applications. Released by Chapman and Hall/CRC, September 2015. Chunqiu Zeng contributes to Chapter 5 (Mining Time Lags).
3. Maximizing Management Performance and Quality with Service Analytics. Released by IGI Global, August 2015. Chunqiu Zeng contributes to Chapter 7 (Tuning up IT Services using Monitoring Configuration Analytics).
4. Data Mining Where Theory Meets Practice. Released by Xiamen University Press, 2013, ISBN 9787561542941. Chunqiu Zeng contributes to Chapter 13 (Data Mining Application in Advanced Manufacturing).

Selected Publications

1. Qing Wang, **Chunqiu Zeng**, Tao Li, S.S. Iyengar, Larisa Shwartz, Genady Y. Grabarnik "AIS-TAR: An Intelligent Integrated System for Online IT Ticket Automation Recommendation", In Proceedings of the 6th annual IEEE International Conference on Big Data (IEEE BigData 2018), Seattle, WA, USA 2018. ([conference paper](#)).
2. Qing Wang, **Chunqiu Zeng**, Wubai Zhou, Tao Li, S.S. Iyengar, Larisa Shwartz, Genady Y. Grabarnik "Online Interactive Collaborative Filtering Using Multi-Armed Bandit with Dependent Arms", in IEEE Transactions on Knowledge and Data Engineering (TKDE), 2018. ([journal paper](#)).
3. Wentao Wang, **Chunqiu Zeng**, Tao Li "Discovering Multiple Time Lags of Temporal Dependencies from Fluctuating Events", in Proceedings of the Asia-Pacific Web (APWeb) and Web-Age Information Management (WAIM) Joint International Conference on Web and Big Data, 2018. ([conference paper](#)).
4. **Chunqiu Zeng**, Wubai Zhou, Tao Li, Larisa Shwartz, Genady Y. Grabarnik "Knowledge Guided Hierarchical Multi-Label Classification over Ticket Data ", in IEEE Transactions on Network and Service Management (TNSM), 2017. ([journal paper](#)).
5. Tao Li, Yexi Jiang, **Chunqiu Zeng**, Bin Xia, Wubai Zhou, Wentao Wang, Liang Zhang, Li Xue, Dewei Bao "FLAP: An End-to-End Event Log Analysis Platform for System Management", In Proceedings of the 23rd annual ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2017. ([conference paper](#)).

6. Wubai Zhou, Wei Xue, Ramesh Baral, Qing Wang, **Chunqiu Zeng**, Tao Li, Jian Xu, Zheng Liu, Larisa Shwartz, Genady Ya. Grabarnik, "STAR: A System for Ticket Analysis and Resolution", In Proceedings of the 23rd annual ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2017. ([conference paper](#)).
7. Qing Wang, Wubai Zhou, **Chunqiu Zeng**, Tao Li, Larisa Shwartz, Genady Ya. Grabarnik, "Constructing the Knowledge Base for Cognitive IT Service Management", in Proceedings of the 14th IEEE International Conference on Services Computing (SCC), 2017. ([conference paper](#)).
8. Tao Li, **Chunqiu Zeng**, Yexi Jiang, Wubai Zhou, Liang Tang, Zheng Liu, Yue Huang, "Data-Driven Techniques for Computing System Management", in ACM Computing Surveys, 2017. ([journal paper](#)).
9. Qifeng Zhou, Tao Li, Wei Xue, **Chunqiu Zeng**, Bin Xia, Ruyuan Han, Linkai Luo "An Advanced Inventory Data Mining System for Business Intelligence ", in Proceedings of IEEE Bigdata Service, 2017. ([conference paper](#)).
10. Tao Li, **Chunqiu Zeng**, Wubai Zhou, Wei Xue, Yue Huang, Zheng Liu, Qifeng Zhou, Bin Xia, Qing Wang, Wentao Wang, Xiaolong Zhu, "FIU-Miner (A Fast, Integrated, and User-Friendly System for Data Mining) and Its Applications", in Knowledge and Information Systems (KAIS), 2016. ([journal paper](#)).
11. Tao Li, Ning Xie, **Chunqiu Zeng**, Wubai Zhou, Li Zheng, Yexi Jiang, Yimin Yang, Hsin-Yu Ha, Wei Xue, Chao Shen, Liang Tang, Lei Li, Shu-ching Chen, Jai Navlakha, and S.S. Iyengar, "Data-driven Techniques in Disaster Information Management", in ACM Computing Surveys, 2016. ([journal paper](#)).
12. **Chunqiu Zeng**, Qing Wang, Wentao Wang, Tao Li, Larisa Shwartz, "Online Inference for Time-Varying Temporal Dependency Discovery from Time Series", in Proceedings of the 4th annual IEEE International Conference on Big Data (IEEE Big Data), 2016. ([conference paper](#)).
13. **Chunqiu Zeng**, Liang Tang, Wubai Zhou, Tao Li, Larisa Shwartz, Genady Ya. Grabarnik, "An Integrated Framework for Mining Temporal Logs from Fluctuating Events", in IEEE Transactions on Services Computing (TSC), 2016. ([journal paper](#)).
14. Tao Li, Wubai Zhou, **Chunqiu Zeng**, Qing Wang, Qifeng Zhou, Dingding Wang, Jia Xu, Yue Huang, Wentao Wang, Minjing Zhang, Steve Luis, Shu-Ching Chen, Naphtali Rishe, "DI-DAP: An Efficient Disaster Information Delivery and Analysis Platform in Disaster Management", in Proceedings of the 25th ACM Conference on Information and Knowledge Management (CIKM 2016), Indianapolis, US, Oct. 2016. ([conference paper](#)).
15. Wubai Zhou, Liang Tang, **Chunqiu Zeng**, Tao Li, Larisa Shwartz, Genady Ya. Grabarnik, "Resolution Recommendation for Event Tickets in Service Management", in IEEE Transactions on Network and Service Management (TNSM), 2016. ([journal paper](#)).
16. **Chunqiu Zeng**, Qing Wang, Shekoofeh Mokhtari, Tao Li, "Online Context-Aware Recommendation with Time Varying Multi-Armed Bandit", In Proceedings of the 22nd annual ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD 2016), San Francisco, USA, 2016. ([conference paper](#)).
17. Jian Xu, Liang Tang, **Chunqiu Zeng**, Tao Li, "Pattern Discovery via Constraint Programming", Knowledge-Based Systems, vol.99, pages 23-32, 2016. ([journal paper](#)).

18. Jian Xu, Yexi Jiang, **Chunqiu Zeng**, Tao Li, "Node Anomaly Detection for HomoGeneous Distributed Environments", Expert Systems with Applications (ESWA 2015). ([journal paper](#)).
19. Liang Tang, Yexi Jiang, Lei Li, **Chunqiu Zeng**, Tao Li. "Personalized Recommendation via Parameter-Free Contextual Bandits", in Proceedings of the 38th Annual International ACM SIGIR Conference (SIGIR 2015), Santiago de Chile., Aug. 9-13, 2015. ([conference paper](#)).
20. **Chunqiu Zeng**, Liang Tang, Tao Li, Larisa Shwartz, Genady Ya. Graharnik. "Mining Temporal Lag from Fluctuating Events for Correlation and Root Cause Analysis", The 10th International Conference on Network and Service Management (CNSM 2014). ([conference paper](#)).
21. **Chunqiu Zeng**, Hongtai Li, Huibo Wang, Yudong Guang, Chang Liu, Tao Li, Mingjin Zhang, Shu-Ching Chen, Naphtali Rische. "Optimizing Online Spatial Data Analysis with Sequential Query Patterns", The 15th IEEE international Conference on Information Integration and Reuse (IRI 2014). ([conference paper](#)).
22. Yexi Jiang, **Chunqiu Zeng**, Jian Xu, Tao Li. "Real time contextual collective anomaly detection over multiple data streams", ACM SIGKDD Workshop Outlier Detection & Description under Data Diversity (SIGKDD Workshop ODD^A2), 2014. ([conference paper](#)).
23. Li Zheng, **Chunqiu Zeng**, Lei Li, Yexi Jiang, Wei Xue, Jingxuan Li, Chao Shen, Wubai Zhou, Hongtai Li, Liang Tang, Tao Li, Bing Duan, Ming Lei, and Pengnian Wang. "Applying Data Mining Techniques to Address Critical Process Optimization Needs in Advanced Manufacturing", in Proceedings of the 20th ACM Conference on Knowledge Discovery and Data Mining (KDD 2014), New York, USA, Aug. 2014. ([conference paper](#)).
24. Lei Li, Chao Shen, Long Wang, Li Zheng, Yexi Jiang, Liang Tang, Hongtai Li, Longhui Zhang, **Chunqiu Zeng**, Tao Li. "iMiner: Mining Inventory Data for Intelligent Management.", in Proceedings of the 23rd ACM Conference on Information and Knowledge Management (CIKM 2014), Shanghai, China, Nov. 2014. ([conference paper](#)).
25. **Chunqiu Zeng**, Tao Li, Larisa Shwartz, Genady Ya. Graharnik. "Hierarchical Multi-Label Classification over Ticket Data using Contextual Loss." in Proceedings of IEEE/IFIP Network Operations and Management Symposium (NOMS'2014), 2014. ([conference paper](#)).
26. **Chunqiu Zeng**, Yexi Jiang, Li Zheng, Jingxuan Li, Lei Li, Hongtai Li, Chao Shen, Wubai Zhou, Tao Li, Bing Duan, Ming Lei, Pengnian Wang. "FIU-Miner: A Fast, Integrated, and User-Friendly System for Data Mining in Distributed Environment." ACM SIGKDD Conference on Knowledge Discovery and Data Mining, 2013. ([conference paper](#)).
27. Li Zheng, Chao Shen, Liang Tang, **Chunqiu Zeng**, Tao Li, Steve Luis, Shu-Ching Chen. "Data Mining Meets the Needs of Disaster Information Management." In IEEE Transactions on Human-Machine Systems, 2013. ([journal paper](#)).
28. Li Zheng, Chao Shen, Liang Tang, **Chunqiu Zeng**, Tao Li, Steve Luis, Shu-Ching Chen and Jainendra K. Navlakha. "Disaster SitRep - A Vertical Search Engine and Information Analysis Tool in Disaster Management Domain." The 13th IEEE International Conference on Information Integration and Reuse (IRI), pp.457 - 465, 2012. ([conference paper](#)).
29. **Chunqiu Zeng**, Jie Zuo, Chuan Li, Kaikuo Xu, Shengqiao Ni, Liang Tang, Yue Zhang, Shaojie Qiao. "MPSQAR: Mining Quantitative Association Rules Preserving Semantics", in Proceedings of the International Conference on Advanced Data Mining and Applications (ADMA), pp. 572

- 580, 2008. (*conference paper*).

30. Liang Tang, Changjie Tang, Lei Duan, Chuan Li, Yexi Jiang, **Chunqiu Zeng**, and Jun Zhu. "MovStream: An Efficient Algorithm for Monitoring Clusters Evolving in Data Streams", in Proceedings of the 2008 IEEE International Conference on Granular Computing (GrC), pp. 582 - 587, 2008. (*conference paper*).
31. LI Chuan, TANG Changjie, **ZENG Chunqiu**, WU Jiang, CHEN Yu, QIU Jiangtao, ZHU Jun, DAI Li, JIANG Yongguang, "Discovering Multi-dimensional Major Medicines from Traditional Chinese Medicine Prescriptions", in Proceedings of 2008 International Conference on BioMedical Engineering and Informatics (BMEI), pp. 260 - 264, 2008. (*conference paper*).
32. Liang Tang, Changjie Tang, Yexi Jiang, Chuan Li, Lei Duan, **Chunqiu Zeng**, Kaikuo Xu. "TROADGrid: An Efficient Trajectory Outlier Detection Algorithm with Grid-based Space Division", in Proceedings of the National Database Conference (NDBC) (China), pp. 185 - 190, 2008. (*conference paper*).
33. ZHANG Yue, TANG Changjie, LI Chuan, ZHU Jun, **ZENG Chunqiu**, TANG Liang, LIU Xianbin. "Mining Naive Intervention Rules in Birth Defect Data", Journal of Frontiers of Computer Science and Tehnology (China). VOL.1 No.2 ,2009.02, pp.188 - 197, 2009. (*journal paper*).
34. Ni Shengqiao, Tang Changjie, Wang Yongwei, Li Chuan, Zhang Yue, **Zeng Chunqiu**, Tang Liang. "Boost Gene Expression Programming based on GPU", in Proceedings of the National Database Conference (NDBC) (China), pp. 227 - 233, 2008. (*conference paper*).

Selected Talks

1. "Online Context-Aware Recommendation with Time Varying Multi-Armed Bandit". The 22nd ACM Conference on Knowledge Discovery and Data Mining (KDD 2016), San Francisco, USA, Aug. 2016
2. "Large Scale Data Mining for IT Service Management". Doctoral Student Forum, SIAM International Conference on Data Mining, Miami, FL, US, 2016.
3. "Mining Temporal Lag from Fluctuating Events for Correlation and Root Cause Analysis". The 6th Student Workshop on Cloud and Data Services, IBM, T. J. Watson Research Center at Yorktown Heights, NY, 2015
4. "Applying Data Mining Techniques to Address Critical Process Optimization Needs in Advanced Manufacturing". The 20th ACM Conference on Knowledge Discovery and Data Mining (KDD 2014), New York, USA, Aug. 2014
5. "Real Time Contextual Collective Anomaly Detection over Multiple Data Streams", ACM SIGKDD Workshop Outliner Detection & Description under Data Diversity (SIGKDD WORKSHOP ODD²), New York, USA, Aug. 2014

Professional Services

Journal Paper Reviewer.

- IEEE Transactions on Knowledge and Data Engineering(TKDE)
- ACM Transactions on Knowledge Discovery from Data(TKDD)
- IEEE Transactions on Services Computing (TSC)
- Knowledge and Information Systems (KAIS)
- IEEE Transactions on Human-Machine Systems (THMS)
- Information Retrieval Journal
- IEICE Transactions on Information and Systems

Conference/Journal Organizing Committee.

- Served as industry/application track chair for the 18th IEEE International Conference on Information Reuse and Integration, 2017 (IRI 2017)
- Served on editorial board of the Software Networking Journal

Program Committee Member.

- The 27th ACM International Conference on Information and Knowledge Management, 2018 (CIKM 2018)
- IEEE International Conference on Data Mining, 2018 (ICDM 2018)
- The 6th IEEE International Conference on Big Data, 2018 (IEEE Big Data 2018)
- 1st International Workshop on AI and Data Mining for Services (ADMS 2018)
- The 26th ACM International Conference on Information and Knowledge Management, 2017 (CIKM 2017)
- The 23rd ACM SIGKDD Conference on Knowledge Discovery and Data Mining (Research Track and Applied Data Science Track), 2017 (KDD 2017)
- The 2nd International Conference on Software Networking, 2017 (ICSN2017)
- The 22nd ACM SIGKDD Conference on Knowledge Discovery and Data Mining (Research Track), 2016 (KDD 2016)
- The 1st International Conference on Software Networking,2016 (ICSN2016)
- 2016 International Conference on Advanced Electronic Science and Technology (AEST2016)
- The 2nd International Conference on Fuzzy Systems and Data Mining (FSDM 2016)

Conference Paper Reviewer.

- The 25th International Joint Conference on Artificial Intelligence, 2016 (IJCAI 2016)
- The 10th ACM Conference on Recommender Systems, 2016 (RecSys 2016)
- The 21st ACM SIGKDD Conference on Knowledge Discovery and Data Mining, 2015 (KDD 2015)
- The 3rd IEEE International Conference on Big Data, 2015 (IEEE Big Data 2015)
- The 9th International Conference on Semantic Computing, 2015 (ICSC 2015)
- The 9th ACM Conference on Recommender Systems, 2015 (RecSys 2015)
- SIAM International Conference on Data Mining, 2015 (SDM 2015)
- The 12th International conference on Service Computing, 2015 (SCC 2015)
- IEEE International Conference on Data Mining, 2013 (ICDM 2013)

Awards

- 2016 Dissertation Year Fellowship at FIU.
- 2016 KDD Rising Star (Rank 6), Microsoft Academic Search, 2016 (<http://www.bing.com/academic/kdd2016risingstars>)
- 08/2016 ACM SIGKDD 2016 Student Travel Award, 2016.
- 05/2016 SDM 2016 Student Travel Award, 2016.
- 12/2014 The Best Graduate Student Research Award in the School of Computing and Information Sciences (SCIS) at FIU for Year 2013-2014.
- 12/2006 The 2nd National Open Source Software Competition (China), Award finalists
- 06/2006 Amway College Student's computer works competition, Second class award
- 2004 Second Prize in Sichuan Contest District for National Undergraduate Mathematical Contest in Modeling