

Xiusi Chen

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RESEARCH INTERESTS

Data Mining, Machine Learning, Natural Language Processing, Reinforcement Learning Applications

EDUCATION

University of California, Los Angeles

2018 - present

Ph.D. candidate in Computer Science

- **Fields:** Data Mining (Graph Mining and Text Mining), Machine Learning (Reinforcement Learning Applications)
- **Thesis Committee:** Wei Wang (Chair), Yizhou Sun, Kai-Wei Chang, Jeffrey Brantingham.

Peking University

2015 - 2018

M.S. in Computer Science

- **Fields:** Data Mining, Recommendation, Database
- **Thesis Committee:** Jun Gao (Chair), Bin Cui, Ming Zhang, and Shuai Ma.

Peking University

2011 - 2015

B.S. in Computer Science

- **Thesis:** The Design and Implementation of Indexes on Distributed Big Graph Processing Framework
- **Advisor:** Prof. Jun Gao

PROFESSIONAL EXPERIENCES

Amazon Search

6/2023 - 9/2023

Query Understanding team, Applied Scientist Intern

Amazon Search

6/2022 - 9/2022

PECOS team, Applied Scientist Intern

NEC Laboratories America

6/2019 - 9/2019

Data Science & System Security, Research Intern

Alibaba

7/2016 - 12/2016

DAMO Academy, Research Intern

PUBLICATIONS

Xiusi Chen, Yu Zhang, Jinliang Deng, Jyun-Yu Jiang, Wei Wang, GOTTA: *Generative Few-shot Question Answering by Prompt-based Cloze Data Augmentation*. In Proceedings of the 2023 SIAM International Conference on Data Mining (**SDM**), 2023. **Best Poster Award (Honorable Mention)**

Xiusi Chen, Jyun-Yu Jiang, Wei Wang, *Scalable Graph Representation Learning via Locality-Sensitive Hashing*. In Proceedings of The 31st ACM International Conference on Information and Knowledge Management (**CIKM**), 2022.

Xiusi Chen, Jyun-Yu Jiang, Kun Jin, Yichao Zhou, Mingyan Liu, Jefferey Brantingham, Wei Wang, RELIABLE: *Offline Reinforcement Learning for Tactical Strategies in Professional Basketball Games*. In Proceedings of The 31st ACM International Conference on Information and Knowledge Management (**CIKM**), 2022.

Jinliang Deng, **Xiusi Chen**, Renhe Jiang, Xuan Song, Ivor W. Tsang, *A Multi-view Multi-task Learning Framework for Multi-variate Time Series Forecasting*. In IEEE Transactions on Knowledge and Data Engineering (**TDKE**), 2022.

Yu Zhang*, Shweta Garg*, Yu Meng, **Xiusi Chen**, Jiawei Han, *MotifClass: Weakly Supervised Text Classification with Higher-order Metadata Information*. In Proceedings of the Fifteenth ACM International Conference on Web Search and Data Mining (**WSDM**), 2022.

Yichao Zhou, Jyun-Yu Jiang, **Xiusi Chen**, Wei Wang. *#StayHome or #Marathon? Social Media Enhanced Pandemic Surveillance on Spatial-temporal Dynamic Graphs*. In Proceedings of The 30th ACM International Conference on Information and Knowledge Management (**CIKM**), 2021.

Jyun-Yu Jiang, Yichao Zhou, **Xiusi Chen**, Yan-Ru Jhou, Liqi Zhao, Sabrina Liu, Po-Chun Yang, Jule Ahmar, Wei Wang. *COVID-19 Surveiller: Toward a Robust and Effective Pandemic Surveillance System based on Social Media Mining*. In Philosophical Transactions of the Royal Society A (**Philosophical Transactions A**), 2022.

Jinliang Deng, **Xiusi Chen**, Renhe Jiang, Xuan Song, Ivor W. Tsang. *ST-Norm: Spatial and Temporal Normalization for Multivariate Time Series Forecasting*. In Proceedings of 27th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (**KDD**), 2021.

Seungbae Kim, **Xiusi Chen**, Jyun-Yu Jiang, Jinyoung Han, Wei Wang. *Evaluating audience loyalty and authenticity in influencer marketing via multi-task multi-relational learning*. In The 15th International AAAI Conference on Web and Social Media (**ICWSM**), 2021.

Jinliang Deng, **Xiusi Chen**, Zipei Fan, Renhe Jiang, Xuan Song, Ivor W. Tsang. 2021. *The Pulse of Urban Transport: Exploring the Co-evolving Pattern for Spatio-temporal Forecasting*. In ACM Transactions on Knowledge Discovery in Data (**TKDD**), 2021.

Yu Zhang, **Xiusi Chen**, Yu Meng, Jiawei Han, *Hierarchical Metadata-Aware Document Categorization under Weak Supervision*. In Proceedings of the Fourteenth ACM International Conference on Web Search and Data Mining (**WSDM**), 2021.

Ruirui Li, Xian Wu, **Xiusi Chen**, Wei Wang, *Self-Attentive Few-Shot Learning for New User Recommendation in Location-based Social Networks*. In Proceedings of The Web Conference 2020 (**WWW**), 2020. Oral.

Fangbo Tao*, Chao Zhang*, **Xiusi Chen**, Meng Jiang, Tim Hanratty, Lance Kaplan and Jiawei Han, *Doc2Cube: Automated Document Allocation to Text Cube via Dimension-Aware Joint Embedding*. In Proceedings of the 17th IEEE International Conference on Data Mining (**ICDM**), 2018. Oral.

Chao Zhang, Fangbo Tao, **Xiusi Chen**, Jiaming Shen, Meng Jiang, Brian Sadler, Michelle Vanni and Jiawei Han, *TaxonGen: Constructing Topical Concept Taxonomy by Adaptive Term Embedding and Clustering*. In Proceedings of 24th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (**KDD**), 2018. Oral.

Chang Zhou, Jinze Bai, Junshuai Song, Xiaofei Liu, Zhengchao Zhao, **Xiusi Chen**, and Jun Gao, *ATRank: An Attention-Based User Behavior Modeling Framework for Recommendation*. In Proceedings of the 32nd AAAI Conference on Artificial Intelligence(**AAAI**), 2018. Oral.

Xiusi Chen, Qimu Zheng, Xinxi Jiang and Jun Gao, *The Design and Implementation of Index on Distributed Big Graph Systems* In Proceedings of the 34th National Database Conference(**NDBC**), 2017. Oral.

Xiusi Chen, Xiaoyu Li, and Jun Gao, *Demo of a Semi-Supervised Method Based System to Detect Advertisements from QA pairs* In Proceedings of the 33rd National Database Conference(**NDBC**), 2016. Oral.

US PATENT

Wenchao Yu, Bo Zong, Wei Cheng, Haifeng Chen, **Xiusi Chen**, *Knowledge Graph and Alignment with Uncertainty Embedding*.

PREPRINTS AND UNDER REVIEW

Xiusi Chen, Jyun-Yu Jiang, Wei-Cheng Chang, Cho-Jui Hsieh, Hsiang-Fu Yu, Wei Wang, *Graph-based Minimum Pre-training Data Generation for Few-shot Question Answering*. working paper.

Xiusi Chen, Ziniu Hu, Kun Jin, Mingyan Liu, Jefferey Brantingham, Wei Wang, *Generative modeling for Tactical Strategy Learning in Professional Basketball Games via Diffusion models*. working paper.

Jessie W. Y. Ko, Shengquan Ni, Alexander Taylor, **Xiusi Chen**, Yicong Huang, Avinash Kumar, Sadeem Alsudais, Zuozhi Wang, Xiaozhen Liu, Wei Wang, Chen Li, Suellen Hopfer, *How the Experience of California Wildfires Shapes Twitter Climate Change Framings*. under review.

Alexander Taylor, Yicong Huang, Junheng Hao, Xinyuan Lin, **Xiusi Chen**, Wei Wang, Chen Li, *Data Science Tasks Using Scripts versus GUI-based Workflows: The Good, the Bad, and the Ugly*. under review.

Jinliang Deng, **Xiusi Chen**, Jiewen Deng, Renhe Jiang, Yi Yang, Du Yin, Xuan Song, Ivor W. Tsang, *Learning Structured Components for Short-Term Multivariate Time Series Forecasting*. under review.

Yu Zhang, Bowen Jin, **Xiusi Chen**, Yanzhen Shen, Yunyi Zhang, Yu Meng, Jiawei Han, *Weakly Supervised Multi-Label Classification of Full-Text Scientific Papers*. under review.

ACADEMIC SERVICE

Conference Program Committee

KDD'20,22,23; WSDM'22-23; SSL@WWW'21;
ICML'23; NeurIPS'22-23; ICLR'22; AAAI'21-23; IJCAI-ECAI'22-23;
ACL'23.

Conference Subreviewer
KDD'18, CIKM'18, WISE'18, IJCAI'19

Journal Reviewer
IEEE Transactions on Big Data (TBD).

Student Volunteer
KDD'20.

HONORS AND AWARDS

SIAM Student Travel Award <i>SIAM</i>	Feb. 2023
SIGIR Student Travel Grant <i>ACM SIGIR</i>	Sept. 2022
SIGIR Student Travel Grant <i>ACM SIGIR</i>	Sept. 2021
Leo KoGuan Fellowship <i>top 2%, Peking University</i>	Sept. 2016
Merit Student <i>top 5%, Peking University</i>	Sept. 2016
Graduate Student Academic Fellowship <i>Peking University</i>	Sept. 2015, 2016, 2017
3rd Place of 17th Chinese University Basketball Association (CUBA) Championships, Beijing Division <i>On behalf of Peking University, Federation of University Sports of China</i>	Oct. 2014
6th Place of the High School Students Swimming Contest of Hunan Province, 100M Breaststroke <i>The Education Department of Hunan Province</i>	Sept. 2010

TEACHING EXPERIENCE

CS 245: Big Data Analysis <i>Teaching Associate, University of California, Los Angeles</i>	Fall 2020
CS 143: Database Systems <i>Teaching Assistant, University of California, Los Angeles</i>	Spring 2020
CS 31: Introduction to Computer Science <i>Teaching Assistant, University of California, Los Angeles</i>	Fall 2019, Winter 2020
Introduction to Database Systems (Honor Track) <i>Teaching Assistant, Peking University</i>	Spring 2016
Database Systems Principles and Technologies <i>Teaching Assistant, Peking University</i>	Fall 2016