CHENGYU WANG

Alibaba Group, Hangzhou, 311121, China

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WORK EXPERIENCE

Senior Algorithm Engineer   *July 2020 – Current*

Machine Learning Platform for AI (PAI) Group, Alibaba Cloud, **Alibaba Group**

Responsibilities: Scientific research and platform development on large-scale deep learning algorithms for Natural Language Processing (NLP) and Automatic Speech Recognition (ASR); Supporting several business units and applications in Alibaba group.

EDUCATION

Ph.D. in Software Engineering   *Sept. 2015 – June 2020*

Software Engineering Institute, **East China Normal University** (ECNU)

Supervisor: Prof. **Xiaofeng He**   Overall GPA: 90.29/100, Major GPA: 90.44/100

Ph.D. Thesis: Algorithmic Studies on Relation Extraction from Chinese Short Texts

Research interests: taxonomy induction, knowledge extraction, knowledge graphs, lexical semantics, natural language understanding, etc.

Won **National Scholarship for PhD Students** three times (2016, 2017, 2019), **ECNU President Scholarship** (2019) and the honor of **Shanghai Outstanding Graduate** (2020)

B.Eng. in Software Engineering   *Sept. 2011 – June 2015*

Software Engineering Institute, **East China Normal University** (ECNU)

Supervisor: Prof. **Xiaofeng He**   Overall GPA: 3.77/4.0, Major GPA: 3.84/4.0

Bachelor Thesis: Regional Traffic Pattern Mining Based on Latent Semantics

Won **National Scholarship** three times (2012, 2013, 2014) and the honor of **Shanghai Outstanding Graduate** (2015)

PUBLICATIONS

Journal Articles:

1. **Chengyu Wang**, Xiaofeng He, Aoying Zhou. *Open Relation Extraction for Chinese Noun Phrases.* IEEE Transactions on Knowledge and Data Engineering (**TKDE**) (in press)

2. **Chengyu Wang**, Xiaofeng He, Aoying Zhou. *HEEL: Exploratory Entity Linking for Heterogeneous Information Networks.* Knowledge and Information Systems (**KAIS**) 62(2): 485–506 (2020)

3. **Chengyu Wang**, Yan Fan, Xiaofeng He, Hongyuan Zha, Aoying Zhou. *Idiomaticity Prediction of Chinese Noun Compounds and Its Applications.* IEEE Access (**IEEE ACCESS**) 7: 142866–142878 (2019)

4. **Chengyu Wang**, Yan Fan, Xiaofeng He, Aoying Zhou. *Decoding Chinese User Generated Categories for Fine-grained Knowledge Harvesting.* IEEE Transactions on Knowledge and Data Engineering (**TKDE**) 31(8): 1491–1505 (2019)

5. **Chengyu Wang**, Yan Fan, Xiaofeng He, Aoying Zhou. *Predicting Hypernym-hyponym Relations for Chinese Taxonomy Learning.* Knowledge and Information Systems (**KAIS**) 58(3): 585–610 (2019)

6. **Chengyu Wang**, Xiaofeng He, Aoying Zhou. *Event Phase Oriented News Summarization.* World Wide Web - Internet and Web Information Systems (**WWWJ**) 21(4): 1069–1092 (2018)

7. **Chengyu Wang**, Guomin Zhou, Xiaofeng He, Aoying Zhou. *NERank+: A Graph-based Approach for Entity Ranking in Document Collections.* Frontiers of Computer Science (**FCS**) 12(3): 504–517 (2018)

8. Jihong Yan, **Chengyu Wang**, Wenliang Cheng, Ming Gao, Aoying Zhou. *A Retrospective of Knowledge Graphs.* Frontiers of Computer Science (**FCS**) 12(1): 55–74 (2018)

9. Jihong Yan, Wenliang Cheng, **Chengyu Wang**, Jun Liu, Ming Gao, Aoying Zhou. *Optimizing Word Set Coverage for Multi-event Summarization.* Journal of Combinatorial Optimization (**JCO**) 30(4):996–1015 (2016)

Conference Papers:

1. **Chengyu Wang**, Minghui Qiu, Jun Huang, Xiaofeng He. *KEML: A Knowledge-Enriched Meta-Learning Framework for Lexical Relation Classification.* Proceedings of the 35th AAAI Conference on Artificial Intelligence (**AAAI** 2021) (accepted)

2. **Chengyu Wang**, Minghui Qiu, Jun Huang, Xiaofeng He. *Meta Fine-tuning Neural Language Models for Multi-domain Text Mining.* Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (**EMNLP** 2020), pages 3094–3104

3. **Chengyu Wang**, Xiaofeng He. *BiRRE: Learning Bidirectional Residual Relation Embeddings for Supervised Hypernymy Detection.* Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (**ACL** 2020), pages 3630–3640

4. **Chengyu Wang**, Xiaofeng He, Aoying Zhou. *SphereRE: Distinguishing Lexical Relations with Hyperspherical Relation Embeddings.* Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics (**ACL** 2019), pages 1727–1737

5. **Chengyu Wang**, Yan Fan, Xiaofeng He, Aoying Zhou. *A Family of Fuzzy Orthogonal Projection Models for Monolingual and Cross-lingual Hypernymy Prediction.* Proceedings of the 2019 World Wide Web Conference (**WWW** 2019), pages 1965–1976

6. **Chengyu Wang**, Xiaofeng He, Aoying Zhou. *Improving Hypernymy Prediction via Taxonomy Enhanced Adversarial Learning.* Proceedings of the 33rd AAAI Conference on Artificial Intelligence (**AAAI** 2019), pages 7128–7135

7. **Chengyu Wang**, Yan Fan, Xiaofeng He, Aoying Zhou. *Learning Fine-grained Relations from Chinese User Generated Categories.* Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing (**EMNLP** 2017), pages 2577–2587

8. **Chengyu Wang**, Xiaofeng He, Aoying Zhou. *A Short Survey on Taxonomy Learning from Text Corpora: Issues, Resources and Recent Advances.* Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing (**EMNLP** 2017), pages 1190–1203

9. **Chengyu Wang**, Junchi Yan, Aoying Zhou, Xiaofeng He. *Transductive Non-linear Learning for Chinese Hypernym Prediction.* Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics (**ACL** 2017), pages 1394–1404

10. **Chengyu Wang**, Xiaofeng He. *Chinese Hypernym-hyponym Extraction from User Generated Categories.* Proceedings of the 26th International Conference on Computational Linguistics (**COLING** 2016), pages 1350–1361

11. **Chengyu Wang**, Rong Zhang, Xiaofeng He, Aoying Zhou. *Error Link Detection and Correction in Wikipedia.* Proceedings of the 25th ACM International Conference on Information and Knowledge Management (**CIKM** 2016), pages 307–316

12. **Chengyu Wang**, Rong Zhang, Xiaofeng He, Guomin Zhou, Aoying Zhou. *Event Phase Extraction and Summarization.* Proceedings of the 17th International Conference on Web Information Systems Engineering (**WISE** 2016), pages 473–488 (Best Paper Nominee)

13. **Chengyu Wang**, Rong Zhang, Xiaofeng He, Guomin Zhou, Aoying Zhou. *NERank: Bringing Order to Named Entities from Texts.* Proceedings of the 18th Asia Pacific Web Conference (**APWeb** 2016), pages 15–27

14. **Chengyu Wang**, Rong Zhang, Xiaofeng He, Aoying Zhou. *NERank: Ranking Named Entities in Document Collections.* Proceedings of the 25th World Wide Web Conference Companion (**WWW** 2016), pages 123–124

15. **Chengyu Wang**, Bing Xiao, Xiang Li, Jiawen Zhu, Xiaofeng He, Rong Zhang. *Predicting Users' Age Range in Micro-blog Network.* Proceedings of the 14th International Conference on Web Information Systems Engineering (**WISE** 2013), pages 516–521 (WISE 2013 Challenge Runner-up Award)

16. Cen Chen, **Chengyu Wang**, Minghui Qiu, Dehong Gao, Linbo Jin, Li Wang. *Cross-domain Knowledge Distillation for Retrieval-based Question Answering Systems.* Proceedings of the 2021 World Wide Web Conference (**WWW** 2021) (accepted)

17. Hui Cai, **Chengyu Wang**, Xiaofeng He. *Debiasing Learning to Rank Models with Generative Adversarial Networks.* Proceedings of the 4th APWeb-WAIM Joint Conference on Web and Big Data (**APWeb-WAIM** 2020), pages 45-60

18. Yan Fan, **Chengyu Wang**, Boxing Chen, Zhongkai Hu, Xiaofeng He. *SPMM: A Soft Piecewise Mapping Model for Bilingual Lexicon Induction.* Proceedings of the 19th SIAM International Conference on Data Mining (**SDM** 2019), pages 244-252

19. Yan Fan, **Chengyu Wang**, Xiaofeng He. *Exploratory Neural Relation Classification for Domain Knowledge Acquisition.* Proceedings of the 27th International Conference on Computational Linguistics (**COLING** 2018), pages 265–2276

20. Guohai Xu, **Chengyu Wang**, Xiaofeng He. *Improving Clinical Named Entity Recognition with Global Neural Attention.* Proceedings of the 2nd APWeb-WAIM Joint Conference on Web and Big Data (**APWeb-WAIM** 2018), pages 264–279

21. Lu Wang, **Chengyu Wang**, Keqiang Wang, Xiaofeng He. *BiUCB: A Contextual Bandit Algorithm for Cold-start and Diversified Recommendation.* Proceedings of the 8th IEEE International Conference on Big Knowledge (**ICBK** 2017), pages 248–253

22. Ruolan Yong, **Chengyu Wang**, Xiaofeng He. *A Transfer Learning based Boosting Model for Emotion Analysis.* Proceedings of the 8th IEEE International Conference on Big Knowledge (**ICBK** 2017), pages 264–269

23. Jinyang Li, **Chengyu Wang**, Xiaofeng He, Rong Zhang, Ming Gao. *User Generated Content Oriented Chinese Taxonomy Construction.* Proceedings of the 17th Asia Pacific Web Conference (**APWeb** 2015), pages 623–634

24. Kun Wang, Guohai Xu, **Chengyu Wang**, Xiaofeng He. *A Hybrid Abnormal Advertising Traffic Detection Method.* Proceedings of the 8th IEEE International Conference on Big Knowledge (**ICBK** 2017), pages 236–241

25. Cen Chen, Xinjing Huang, Feng Ji, **Chengyu Wang**, Minghui Qiu, Jun Huang, Yin Zhang. *CAT-BERT: A Context-Aware Transferable BERT Model for Multi-Turn Machine Reading Comprehension.* Proceedings of the 26th International Conference on Database Systems for Advanced Applications (**DASFAA** 2021) (accepted)

Software Demonstrations:

1. **Chengyu Wang**, Mengli Cheng, Xu Hu, Jun Huang. *EasyASR: A Distributed Machine Learning Platform for End-to-end Automatic Speech Recognition.* Proceedings of the 35th AAAI Conference on Artificial Intelligence (**AAAI** 2021) (accepted)

2. Yan Fan, **Chengyu Wang**, Guomin Zhou, Xiaofeng He. *DKGBuilder: An Architecture for Building a Domain Knowledge Graph from Scratch.* Proceedings of the 22nd International Conference on Database Systems for Advanced Applications (**DASFAA** 2017), pages 663–667

3. Leyi Song, **Chengyu Wang**, Xiaoyi Duan, Bing Xiao, Xiao Liu, Rong Zhang, Xiaofeng He, Xueqing Gong. *TaxiHailer: A Situation-specific Taxi Pick-up Points Recommendation System.* Proceedings of the 19th International Conference on Database Systems for Advanced Applications (**DASFAA** 2014), pages 523–526

4. Chi Zhang, Yanhua Wang, **Chengyu Wang**, Wenliang Cheng, Xiaofeng He. *SNExtractor: A Prototype for Extracting Semantic Networks from Web Documents.* Proceedings of the 17th International Conference on Web-Age Information Management (**WAIM** 2016), pages 527–530

Workshop Papers:

1. **Chengyu Wang**, Ming Gao, Xiaofeng He and Rong Zhang. *Challenges in Chinese Knowledge Graph Construction.* Proceedings of the 6th International Workshop on Data Engineering meets the Semantic Web (**DESWeb** 2015), pages 59-61, in conjunction with **ICDE** 2015

2. Wenliang Cheng, **Chengyu Wang**, Bing Xiao, Weining Qian, Aoying Zhou. *On Statistical Characteristics of Real-life Knowledge Graphs.* Proceedings of the 6th International Workshop on Big data benchmarks, Performance, Optimization and Emerging hardware (**BPOE** 2015), pages 37–49, in conjunction with **VLDB** 2015

3. Fan Xia, Qunyan Zhang, **Chengyu Wang**, Weining Qian, Aoying Zhou. *On the Rise and Fall of Sina Weibo: Analysis Based on a Fixed User Group.* Proceedings of the 1st International Workshop on Scalable Social Event Processing and Management (**SSEPM** 2015), pages 224–231, in conjunction with **ICDE** 2015

4. Yonghao Su, Chi Zhang, Jinyang Li, **Chengyu Wang**, Weining Qian, Aoying Zhou. *Cross-lingual Entity Query from Large-scale Knowledge Graphs.* Proceedings of the 2nd International Workshop on Web Data Mining and Applications (**WDMA** 2015), pages 139–150, in conjunction with **APWeb** 2015

Papers in Chinese with English Abstracts:

1. **Chengyu Wang**. *Algorithmic Studies on Relation Extraction from Chinese Short Texts.* **Ph.D. Thesis** (Supervisor: Prof. Xiaofeng He)

2. **Chengyu Wang**, Xiaofeng He, Xuegong Gong, Aoying Zhou. *Word Embedding Projection Models for Hypernymy Relation Prediction.* Chinese Journal of Computers (**CJC**) 43(5):868–883 (2020)

3. Jinyang Li, Yanhua Wang, Yan Fan, **Chengyu Wang**, Rong Zhang, Xiaofeng He. *Chinese Taxonomy Construction and Search System.* Journal of Computer Applications (**JCA**) 36(S1):207–209 (2016)

SKILLS AND ABILITIES

Technical Skills:

Programming	Java, Python, SQL, LaTeX
Platforms & Tools	Hadoop, Keras, TensorFlow, Lucene, Weka
Qualifications	EMC Academic Associate, Cloud Infrastructure and Services
	EMC Academic Associate, Information Storage and Management

Language Proficiency:

Chinese	Native Speaker
English	Good Command of Reading, Writing, Translation and Interpretation
	Shanghai Advanced English Interpretation (Dec. 2013)
	CET-6: 636/710 CET-4: 663/710
Japanese	Intermediate Level with Basic Communication Skills
	New Japanese Language Proficiency Test (JLPT): N3 Level (July 2013)

SELECTED AWARDS AND SCHOLARSHIPS

Scholarships:

Dec. 2019	**ECNU President Scholarship** (Top-10 graduate students in ECNU)
Dec. 2019	**National Scholarship for PhD Students**
Dec. 2018	Student Science and Technology Excellence Scholarship
	(Top-1 in School of Computer Science and Software Engineering, ECNU)
Dec. 2017	**National Scholarship for PhD Students**
Dec. 2016	**National Scholarship for PhD Students**
Dec. 2015	ECNU Graduate Freshman Scholarship
Dec. 2014	**National Scholarship**
Dec. 2013	**National Scholarship**
Dec. 2012	**National Scholarship**

Honors and Grants:

Sept. 2020	Excellent Dissertation Award of the Faculty of Information, ECNU
May 2020	**Shanghai Outstanding Graduate**
July 2019	ACL 2019 Student Volunteer Program
Jan. 2019	AAAI 2019 Student Volunteer and Scholarship Program
Oct. 2018	**Microsoft Research Asia Fellowship Nominee**
	(Top 20 out of all Ph.D. candidate applicants in Asia-Pacific regions)
Dec. 2016	Recipient, ECNU Outstanding Doctoral Dissertation Cultivation Plan of Action
	(Only 2 among all Ph.D. candidates in School of Computer Science and Software
	Engineering, ECNU)
Dec. 2016	COLING 2016 Student Support Program
Nov. 2016	WISE 2016 Best Paper Nominee
Oct. 2016	SIGIR Student Travel Grant (CIKM 2016)
April 2016	Google Student Travel Grant (WWW 2016)
May 2015	**Shanghai Outstanding Graduate**

Competition Awards:

May 2018	Third Prize in National English Contest for College Students (Level A)
June 2014	Special Prize in Mathematical Modeling Contest for College Students
May 2014	**Special Prize in National English Contest for College Students (Level C)** (Top 0.1% among all participants)
Dec. 2013	**Second Prize in First National Big Data Technology Innovation Contest** (Among 3 teams that won the Second Prize out of 660 teams worldwide)
Oct. 2013	WISE 2013 Challenge Runner-up Award
May 2013	Second Prize in National English Contest for College Students (Level C)
May 2012	Third Prize in National English Contest for College Students (Level C)

ACADEMIC ACTIVITIES

Conference Presentation:

- 2021: AAAI 2021 Oral (Online)

- 2020: ACL 2020 Oral (Online), EMNLP 2020 Oral (Online)

- 2019: AAAI 2019 Spotlight & Poster (Honolulu, USA), WWW 2019 Oral & Poster (San Francisco, USA), ACL 2019 Oral (Florence, Italy)

- 2016: WWW 2016 Poster (Montréal, Canada), APWeb 2016 Oral (Suzhou, China), CIKM 2016 Oral (Indianapolis, USA), WISE 2016 Oral (Shanghai, China), COLING 2016 Oral (Osaka, Japan)

- 2015: DESWeb@ICDE 2015 Oral (Seoul, South Korea)

- 2013: WISE 2013 Oral (Nanjing, China)

Academic Services:

- Conference PC Member: ACL 2019, ACL 2020, EMNLP 2020, EACL 2021, AAAI 2021, AAAI 2021 (Demo Track), NAACL 2021, ACL-IJCNLP 2021

- Conference Reviewer (Secondary): NDBC 2015, APWeb 2016, KDD 2017, CIKM 2017, ICDM 2017, COLING 2018 (Student Mentoring Program), COLING 2018, KDD 2018, ICDM 2018, ICBK 2018, KDD 2019, ICDM 2019, IJCAI-PRICAI 2020

- Journal Reviewer: IEEE Access (2018-2020), Expert Systems (2019), ACM Transactions on Asian and Low-Resource Language Information Processing (ACM TALLIP) (2019-2020), IEEE Transactions on Computational Social Systems (TCSS) (2020)

- Conference Volunteer: AAAI 2019 (Honolulu, USA), ACL 2019 (Florence, Italy)

Teaching Experience:

2016	TA, Database Systems and Applications (Spring Semester)
2015	TA, Web System Development (Autumn Semester)

REFERENCES

- Xiaofeng He, Professor
  E-mail: hexf@cs.ecnu.edu.cn
  School of Computer Science and Technology, East China Normal University

- Aoying Zhou, Professor
  E-mail: ayzhou@dase.ecnu.edu.cn
  Vice President, East China Normal University

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