

Weiwei Cheng

Curriculum Vitae

weiwei.cheng@outlook.com

WORK EXPERIENCE

Full-time positions

- 2023 – now **Senior principal scientist**
Fashion Store
Zalando
Berlin, Germany
- 2017 – 2022 **Senior scientist**
Leading research initiatives on machine learning and natural language processing for teams across Amazon including Alexa, search, marketplace
Amazon
Berlin, Germany
- 2013 – 2017 **Scientist**
Working on machine learning and natural language processing projects for teams across Amazon including consumer electronics, customer reviews, Kindle
Amazon
Berlin, Germany
- 2007 – 2013 **Researcher**
Machine learning research funded by German Research Foundation & Hessen State Ministry for Higher Education, Research and the Arts
Faculty of Mathematics and Computer Science
Philipps University Marburg
Marburg, Germany

Part-time positions & internships

- 2021 – 2022 **Bar Raiser**
Steward of Amazon's interview process to make sure every new hire has growth potential and brings skills that are better than 50% of their would-be peers
Amazon
Berlin, Germany
- 2011 – 2012 **Student consultant**
Consulting service for Asian students
Faculty of Mathematics and Computer Science
Philipps University Marburg
Marburg, Germany

- 2010 **Research intern**
Improving machine learning with large-scale ontological knowledge
Machine Learning and Perception Group
Microsoft Research Cambridge
Cambridge, UK
- 2009 **Data mining consulting intern**
Analyzing and mining IT-related audit issues
Group Technology and Operations
Deutsche Bank
Frankfurt, Germany
- 2006 – 2007 **Research assistant**
Efficient preference operators in very large database systems
Faculty of Computer Science
Otto von Guericke University Magdeburg
Magdeburg, Germany
- 2003 **Software development intern**
Geographic information system for electricity distribution management
Xinli Software
Hefei, China

EDUCATION

- 2007 – 2012 **PhD magna cum laude in Computer Science (Dr. rer. nat.)** *China national award*
Thesis: Label ranking with probabilistic models
Faculty of Mathematics and Computer Science
Philipps University Marburg, Germany
- 2005 – 2007 **MS with highest distinction in Computer Science** *best graduate award*
Subject: Data and Knowledge Engineering
GPA: 4.0/4.0
Thesis: Interactive ranking of skylines using machine learning techniques
Otto von Guericke University Magdeburg, Germany
- 2000 – 2004 **BS in Computer Science & Business Administration**
Thesis of CS: Database systems for personnel management
Thesis of BA: Retail analysis and development in Zhengzhou
Zhengzhou University, China

HONORS & AWARDS

Awards

- Jul. 2015 **Prominent paper award**
Artificial Intelligence Journal Prominent Paper Award 2015
The 24th International Joint Conference on Artificial Intelligence
Buenos Aires, Argentina

- Jul. 2013 **Best paper award**
The 21st International Conference on Case-Based Reasoning
Saratoga Springs, USA
- May 2013 **Notable Computing Books and Articles of 2012**
ACM Computing Reviews
New York City, USA
- Apr. 2012 **Data mining competition award**
The 2nd place at JRS 2012 Data Mining Competition
Chengdu, China
- Jul. 2011 **Nomination for best student paper award**
The 7th Conference of the European Society for Fuzzy Logic and Technology
Aix-les-Bains, France
- Jun. 2010 **China national award**
Chinese Government Award for Outstanding Self-Financed Students Abroad
Ministry of Education of China
Berlin, Germany
- Sep. 2009 **Best paper award**
Machine Learning Journal Best Student Paper Award
The 19th European Conference on Machine Learning
Bled, Slovenia
- Oct. 2008 **Best graduate award**
Best Graduate 2007/2008 in Master of Data and Knowledge Engineering
Otto von Guericke University Magdeburg
Magdeburg, Germany
- Sep. 2008 **Nomination for best paper award**
The 9th European Conference on Case-Based Reasoning
Trier, Germany
- Jun. 2002 **Best debater award**
The 1st Henan Universities Debating Championship
Zhengzhou, China
- Aug. 1999 **Speech contest award**
The 3rd prize at national speech contest “The 50 Years”
Anqing, China

Scholarships & grants

- Jul. 2012 **DAAD conference scholarship**
German Academic Exchange Service (DAAD)
Vilnius, Lithuania
- Dec. 2011 **NIPS travel grant**
Sponsored by Winton Capital, etc.

The 25th Annual Conference on Neural Information Processing Systems
Granada, Spain

- Apr. 2011 **DAAD STIBET scholarship**
Sponsored by German Academic Exchange Service (DAAD)
Marburg University Research Academy
Marburg, Germany
- Sep. 2010 **UNESCO ECMLPKDD conference grant**
Sponsored by UNESCO Chair in Data Privacy
European Conference on Machine Learning and Principles and Practice of Knowledge
Discovery in Databases
Barcelona, Spain
- Jun. 2010 **ICML scholarship**
Sponsored by IBM, National Science Foundation (NSF), etc.
The 27th International Conference on Machine Learning
Haifa, Israel
- Jun. 2009 **ICML scholarship**
Sponsored by National Science Foundation (NSF), etc.
The 26th International Conference on Machine Learning
Montreal, Canada
- Sep. 2008 **MLSS scholarship**
Sponsored by Predict & Control and Lille's Computer Science Laboratory
The 10th Machine Learning Summer School
Ile De Re, France
- Oct. 2006 **Outstanding international student scholarship**
Saxony-Anhalt State Ministry for Education and Cultural Affairs
Magdeburg, Germany

PUBLICATIONS

- Nov. 2021 Marco Del Tredici, Gianni Barlacchi, Xiaoyu Shen, Weiwei Cheng, Adrià de Gispert
Question rewriting for open-domain conversational QA: best practices and limitations
Proceedings of the 30th ACM Conference on Information and Knowledge Management (CIKM-21): 2974-2978, ACM
Virtual Event, Australia
- Aug. 2020 Michael Sejr Schlichtkrull, Weiwei Cheng
Evaluating for diversity in question generation over text
arXiv:2008.07291 [cs.CL]
- Jun. 2018 Nam Khanh Tran, Weiwei Cheng
Multiplicative tree-structured long short-term memory networks for semantic representations
Proceedings of the 7th Joint Conference on Lexical and Computational Semantics

(*SEM-18): 276-286, ACL
New Orleans, USA *long oral presentation*

- Jul. 2017 Nedelina Teneva, Weiwei Cheng
Salience rank: efficient keyphrase extraction with topic modeling
Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics (ACL-17), Vol. 2: 530-535, ACL
Vancouver, Canada
- Sep. 2015 Eyke Hüllermeier, Weiwei Cheng
Superset learning based on generalized loss minimization
LNAI 9285 Machine Learning and Knowledge Discovery in Databases: 260-275, Springer
European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-15)
Porto, Portugal
- Dec. 2014 Róbert Busa-Fekete, Balázs Szörényi, Paul Weng, Weiwei Cheng, Eyke Hüllermeier
Preference-based reinforcement learning: evolutionary direct policy search using a preference-based racing algorithm
Machine Learning 97: 327-351, Springer
- Nov. 2014 Willem Waegeman, Krzysztof Dembczyński, Arkadiusz Jachnik, Weiwei Cheng, Eyke Hüllermeier
On the Bayes-optimality of F-measure maximizers
Journal of Machine Learning Research 15: 3333-3388, Microtome Publishing
- Oct. 2013 Weiwei Cheng, Sascha Henzgen, Eyke Hüllermeier
Labelwise versus pairwise decomposition in label ranking
Proceedings of Lernen-Wissen-Adaptivität 2013 (LWA-13): 140-147, Otto Friedrich University Bamberg
Bamberg, Germany
- Aug. 2013 Weiwei Cheng, Eyke Hüllermeier
A nearest neighbor approach to label ranking based on generalized labelwise loss minimization
Proceedings of the 7th Multidisciplinary Workshop on Advances in Preference Handling (M-PREF-13)
The 23rd International Joint Conference on Artificial Intelligence (IJCAI-13)
Beijing, China
- Aug. 2013 Eyke Hüllermeier, Weiwei Cheng
Preference-based CBR: general ideas and basic principles
Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI-13): 3012-3016, AAAI Press
Beijing, China *invited paper*
- Jul. 2013 Amira Abdel-Aziz, Weiwei Cheng, Marc Strickert, Eyke Hüllermeier
Preference-based CBR: a search-based problem solving framework
LNAI 7969 Case-Based Reasoning Research and Development: 1-14, Springer
The 21st International Conference on Case-Based Reasoning (ICCBR-13)
Saratoga Springs, USA *best paper award*

- Jun. 2013 Dominik Heider, Robin Senge, Weiwei Cheng, Eyke Hüllermeier
Multilabel classification for exploiting cross-resistance information in HIV-1 drug resistance prediction
 Bioinformatics 29: 1946-1952, Oxford University Press
- Jun. 2013 Róbert Busa-Fekete, Balázs Szörényi, Paul Weng, Weiwei Cheng, Eyke Hüllermeier
Top-k selection based on adaptive sampling of noisy preferences
 Proceedings of the 30th International Conference on Machine Learning (ICML-13): 1094-1102, Microtome Publishing
 Atlanta, USA
- May 2013 Róbert Busa-Fekete, Balázs Szörényi, Paul Weng, Weiwei Cheng, Eyke Hüllermeier
Preference-based evolutionary direct policy search
 Workshop Proceedings of Autonomous Learning 2013 (AL-13)
 IEEE International Conference on Robotics and Automation (ICRA-13)
 Karlsruhe, Germany
- Dec. 2012 Weiwei Cheng, Eyke Hüllermeier, Willem Waegeman, Volkmar Welker
Label ranking with partial abstention based on thresholded probabilistic models
 Advances in Neural Information Processing Systems 25 (NIPS-12): 2510-2518, Curran Associates
 Lake Tahoe, USA
- Dec. 2012 Ali Fallah Tehrani, Weiwei Cheng, Eyke Hüllermeier
Preference learning using the Choquet integral: the case of multipartite ranking
 IEEE Transactions on Fuzzy Systems 20: 1102-1113, IEEE Computational Intelligence Society
- Sep. 2012 Weiwei Cheng, Eyke Hüllermeier
Probability estimation for multi-class classification based on label ranking
 LNAI 7524 Machine Learning and Knowledge Discovery in Databases: 83-98, Springer
 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-12)
 Bristol, UK
- Aug. 2012 Weiwei Cheng, Krzysztof Dembczyński, Eyke Hüllermeier, Adrian Jaroszewicz, Willem Waegeman
F-measure maximization in topical classification
 LNAI 7413 Rough Sets and Current Trends in Computing: 422-431, Springer
 Joint Rough Set Symposium (JRS-12)
 Chengdu, China *invited paper of JRS 2012 Data Mining Competition*
- Aug. 2012 Ali Fallah Tehrani, Weiwei Cheng, Krzysztof Dembczyński, Eyke Hüllermeier
Learning monotone nonlinear models using the Choquet integral
 Machine Learning 89: 183-211, Springer *selected paper (7 out of 599) from ECMLPKDD-11*
- Aug. 2012 Johannes Fürnkranz, Eyke Hüllermeier, Weiwei Cheng, Sang-Hyeun Park
Preference-based reinforcement learning: a formal framework and a policy iteration algorithm
 Machine Learning 89: 123-156, Springer *selected paper (7 out of 599) from ECMLPKDD-11*

- Jul. 2012 Krzysztof Dembczyński, Willem Waegeman, Weiwei Cheng, Eyke Hüllermeier
On label dependence and loss minimization in multi-label classification
 Machine Learning 88: 5-45, Springer *Notable Computing Books and Articles by ACM Computing Reviews*
- May 2012 Weiwei Cheng
Label ranking with probabilistic models
 Doctoral thesis
 Faculty of Mathematics and Computer Science, Philipps University Marburg
 Marburg, Germany *magna cum laude*
- Dec. 2011 Krzysztof Dembczyński, Willem Waegeman, Weiwei Cheng, Eyke Hüllermeier
An exact algorithm for F-measure maximization
 Advances in Neural Information Processing Systems 24 (NIPS-11): 223-230, Curran Associates
 Granada, Spain *NIPS travel grant*
- Dec. 2011 Weiwei Cheng, Eyke Hüllermeier
Label ranking with abstention: predicting partial orders by thresholding probability distributions
 Workshop Proceedings of Choice Models and Preference Learning 2011 (CMPL-11)
 The 25th Annual Conference on Neural Information Processing Systems (NIPS-11)
 Sierra Nevada, Spain *NIPS travel grant*
- Dec. 2011 Thomas Fober, Weiwei Cheng, Eyke Hüllermeier
Focusing search in multiobjective evolutionary optimization through preference learning from user feedback
 Proceedings of the 21st Workshop Computational Intelligence (WCI-11): 107-117,
 KIT Scientific Publishing
 Dortmund, Germany
- Oct. 2011 Weiwei Cheng, Gjergji Kasneci, Thore Graepel, David Stern, Ralf Herbrich
Automated feature generation from structured knowledge
 Proceedings of the 20th ACM Conference on Information and Knowledge Management (CIKM-11): 1395-1404, ACM
 Glasgow, UK
- Sep. 2011 Ali Fallah Tehrani, Weiwei Cheng, Krzysztof Dembczyński, Eyke Hüllermeier
Learning monotone nonlinear models using the Choquet integral
 LNAI 6913 Machine Learning and Knowledge Discovery in Databases: 414-429, Springer
 European Conference on Machine Learning and Principles and Practice of Knowledge
 Discovery in Databases (ECMLPKDD-11)
 Athens, Greece *invited to Machine Learning Journal Special Issue*
- Sep. 2011 Weiwei Cheng, Johannes Fürnkranz, Eyke Hüllermeier, Sang-Hyeun Park
Preference-based policy iteration: leveraging preference learning for reinforcement learning
 LNAI 6911 Machine Learning and Knowledge Discovery in Databases: 312-327, Springer
 European Conference on Machine Learning and Principles and Practice of Knowledge
 Discovery in Databases (ECMLPKDD-11)
 Athens, Greece *invited to Machine Learning Journal Special Issue*

- Jul. 2011 Ali Fallah Tehrani, Weiwei Cheng, Eyke Hüllermeier
Choquistic regression: generalizing logistic regression using the Choquet integral
 Proceedings of the 7th Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT-11): 868-875, Atlantis Press
 Aix-les-Bains, France *nominated for best student paper award*
- Dec. 2010 Ali Fallah Tehrani, Weiwei Cheng, Eyke Hüllermeier
Preference learning using the Choquet integral: the case of multipartite ranking
 Proceedings of the 20th Workshop Computational Intelligence (WCI-10): 119-130, KIT Scientific Publishing
 Dortmund, Germany
- Sep. 2010 Weiwei Cheng, Michaël Rademaker, Bernard De Baets, Eyke Hüllermeier
Predicting partial orders: ranking with abstention
 LNAI 6321 Machine Learning and Knowledge Discovery in Databases: 215-230, Springer
 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-10)
 Barcelona, Spain *UNESCO ECMLPKDD conference grant*
- Sep. 2010 Krzysztof Dembczyński, Willem Waegeman, Weiwei Cheng, Eyke Hüllermeier
Regret analysis for performance metrics in multi-label classification: the case of Hamming and subset zero-one loss
 LNAI 6321 Machine Learning and Knowledge Discovery in Databases: 280-295, Springer
 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-10)
 Barcelona, Spain *UNESCO ECMLPKDD conference grant*
- Jun. 2010 Krzysztof Dembczyński, Willem Waegeman, Weiwei Cheng, Eyke Hüllermeier
On label dependence in multi-label classification
 Workshop Proceedings of Learning from Multi-Label Data 2010 (MLD-10): 5-12
 The 27th International Conference on Machine Learning (ICML-10)
 Haifa, Israel *invited paper*
- Jun. 2010 Weiwei Cheng, Krzysztof Dembczyński, Eyke Hüllermeier
Label ranking methods based on the Plackett-Luce model
 Proceedings of the 27th International Conference on Machine Learning (ICML-10): 215-222, Omnipress
 Haifa, Israel *ICML scholarship*
- Jun. 2010 Weiwei Cheng, Krzysztof Dembczyński, Eyke Hüllermeier
Graded multi-label classification: the ordinal case
 Proceedings of the 27th International Conference on Machine Learning (ICML-10): 223-230, Omnipress
 Haifa, Israel *ICML scholarship*
- Jun. 2010 Krzysztof Dembczyński, Weiwei Cheng, Eyke Hüllermeier
Bayes optimal multi-label classification via probabilistic classifier chains
 Proceedings of the 27th International Conference on Machine Learning (ICML-10): 279-286, Omnipress
 Haifa, Israel *ICML scholarship*

- Sep. 2009 Weiwei Cheng, Eyke Hüllermeier
Label ranking with partial abstention using ensemble learning
Workshop Proceedings of Preference Learning 2009 (PL-09): 17-23
European Conference on Machine Learning and Principles and Practice of Knowledge
Discovery in Databases (ECMLPKDD-09)
Bled, Slovenia
- Sep. 2009 Weiwei Cheng, Eyke Hüllermeier
**A simple instance-based approach to multi-label classification using the Mallows
model**
Workshop Proceedings of Learning from Multi-Label Data 2009 (MLD-09): 28-38
European Conference on Machine Learning and Principles and Practice of Knowledge
Discovery in Databases (ECMLPKDD-09)
Bled, Slovenia
- Sep. 2009 Weiwei Cheng, Eyke Hüllermeier
**Combining instance-based learning and logistic regression for multi-label classi-
fication**
Machine Learning 76: 211-225, Springer
European Conference on Machine Learning and Principles and Practice of Knowledge
Discovery in Databases (ECMLPKDD-09)
Bled, Slovenia *Machine Learning Journal Best Student Paper Award*
- Jun. 2009 Weiwei Cheng, Jens Hühn, Eyke Hüllermeier
Decision tree and instance-based learning for label ranking
Proceedings of the 26th International Conference on Machine Learning (ICML-09):
161-168, Omnipress
Montreal, Canada *ICML scholarship*
- May 2009 Weiwei Cheng, Eyke Eyke Hüllermeier
A new instance-based label ranking approach using the Mallows model
LNCS 5551 Advances in Neural Networks: 707-716, Springer
The 6th International Symposium on Neural Networks (ISNN-09)
Wuhan, China
- Oct. 2008 Weiwei Cheng, Eyke Hüllermeier
Ranking skylines using active learning techniques
Proceedings of Chinese Intelligent Systems Engineering 2008 (CNISE-08)
Chengdu, China
- Sep. 2008 Weiwei Cheng, Eyke Hüllermeier
Instance-based label ranking using the Mallows model
Workshop Proceedings of Preference Learning 2008 (PL-08)
European Conference on Machine Learning and Principles and Practice of Knowledge
Discovery in Databases (ECMLPKDD-08)
Antwerp, Belgium
- Sep. 2008 Weiwei Cheng, Eyke Hüllermeier
Instance-based label ranking using the Mallows model
Workshop Proceedings of ECCBR-08: 143-157
Uncertainty and Knowledge Discovery in CBR

The 9th European Conference on Case-Based Reasoning (ECCBR-08)
Trier, Germany

- Sep. 2008 Weiwei Cheng, Eyke Hüllermeier
Learning similarity functions from qualitative feedback
LNAI 5239 Advances in Case-Based Reasoning: 120-134, Springer
The 9th European Conference on Case-Based Reasoning (ECCBR-08)
Trier, Germany *nominated for best paper award*
- Aug. 2008 Eyke Hüllermeier, Johannes Fürnkranz, Weiwei Cheng, Klaus Brinker
Label ranking by learning pairwise preferences
Artificial Intelligence 172: 1897-1916, Elsevier *Artificial Intelligence Journal Prominent Paper Award 2015*
- Oct. 2007 Weiwei Cheng
Interactive ranking of skylines using machine learning techniques
Master's thesis
Faculty of Computer Science, Otto von Guericke University Magdeburg
Magdeburg, Germany *mit Auszeichnung*
- Sep. 2007 Weiwei Cheng, Eyke Hüllermeier, Bernhard Seeger, Ilya Vladimirskiy
Interactive ranking of skylines using machine learning techniques
Proceedings of Lernen-Wissen-Adaptivität 2007 (LWA-07): 141-148, Martin Luther
University Halle-Wittenberg
Halle, Germany

PATENTS

- Mar. 2023 Valentin Flunkert, Weiwei Cheng, inventors; Amazon Technologies, Inc., assignee
Artificial intelligence system using deep neural networks for pairwise character-level text analysis and recommendations
US Patent 11,599,927
- Jun. 2022 Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee
Artificial intelligence system for generating network-accessible recommendations with explanatory metadata
US Patent 11,367,117
- Feb. 2021 Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee
Artificial intelligence system for automated generation of realistic question and answer pairs
US Patent 10,929,392
- Oct. 2020 Weiwei Cheng, Amanda Dee Bottorff, Sandeep Ranganathan, inventors; Amazon Technologies, Inc., assignee
Extracting keywords from a document
US Patent 10,796,094
- Feb. 2020 Weiwei Cheng, Christopher Gonzales, inventors; Amazon Technologies, Inc., assignee
Document content analysis based on topic modeling
US Patent 10,558,657

- Aug. 2019 Weiwei Cheng, Amanda Dee Bottorff, Sandeep Ranganathan, inventors; Amazon Technologies, Inc., assignee
Extracting keywords from a document
 US Patent 10,387,568
- Apr. 2019 Weiwei Cheng, Christopher Gonzales, inventors; Amazon Technologies, Inc., assignee
Document content analysis based on topic modeling
 US Patent 10,255,283
- Apr. 2019 Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee
Generating a set of representative items using a maximum-set-coverage selection strategy
 US Patent 10,248,712
- Oct. 2018 Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee
Generating a set of representative items using a dynamic selection strategy
 US Patent 10,114,887
- Oct. 2018 Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee
Generating a set of representative items using a clustering-selection strategy
 US Patent 10,114,885
- Nov. 2016 Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee
Determining representative items using a diversity scoring strategy
 US patent application
- Dec. 2015 Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee
Generating a set of diversified items
 US patent application
- Dec. 2014 Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee
Machine learning based analysis of reviews
 US patent application

TALKS & TUTORIALS

- Sep. 2017 **Saliency rank: efficient keyphrase extraction with topic modeling**
 Data Science Luxembourg
 Luxembourg City, Luxembourg
- May 2017 **Saliency rank: efficient unsupervised keyphrase extraction with topic modeling**
 The 5th Amazon Machine Learning Conference
 Seattle, US
- May 2016 **Applying natural language processing at Amazon**
 Amazon-Oxford-Warwick Workshop on Machine Learning Applications and Computational Statistics
 Berlin, Germany

- Mar. 2014 **Preference learning using statistical methods for label ranking**
Seminars on Machine Learning at Poznan University of Technology
Poznan, Poland
- Aug. 2013 **Preference-based evolutionary direct policy search**
Dagstuhl Seminar 13321: The 11th European Workshop on Reinforcement Learning
(EWRL-13)
Dagstuhl, Germany
- Jul. 2012 **Preference-based reinforcement learning**
The 25th European Conference on Operational Research (EURO-12)
Vilnius, Lithuania *DAAD conference scholarship*
- Sep. 2011 **Learning monotone nonlinear models using the Choquet integral**
Lernen-Wissen-Adaptivität (LWA-11)
Magdeburg, Germany
- Dec. 2010 **The RipOff! game: a tutorial of cooperative game theory**
with Yoram Bachrach
Think Computer Science
Cambridge, UK
- Sep. 2010 **Graded multi-label classification: the ordinal case**
Lernen-Wissen-Adaptivität (LWA-10)
Kassel, Germany
- Jun. 2010 **Acceptance speech of 2009 Chinese Government Award for Outstanding Self-
Financed Students Abroad**
Embassy of China
Berlin, Germany
- Nov. 2009 **Text classification: concepts and methods**
Association of Chinese Computer Scientists in Germany (GCI) Annual Conference
Fürth, Germany
- Nov. 2009 **Text classification: a back-to-school tutorial**
GTO IES Audit & Risk Management Department, Deutsche Bank
Frankfurt, Germany
- Oct. 2009 **Human vs. computer: case studies**
Association of Chinese Scholars and Students in Magdeburg (VCWSM e.V.)
Magdeburg, Germany
- Oct. 2009 **Multi-label classification: a new machine learning problem**
Lightning Talk, the 4th Annual Google Test Automation Conference (GTAC-09)
Zurich, Switzerland
- Sep. 2009 **Combining instance-based learning and logistic regression for multi-label classi-
fication**
Lernen-Wissen-Adaptivität (LWA-09)
Darmstadt, Germany

- Sep. 2009 **Human-computation in internet**
 Association of Chinese Computer Scientists in Germany (GCI) IT Strategy Workshop
 Schwetzingen, Germany
- Nov. 2008 **Ranking the skyline: an application of preference learning**
 Association of Chinese Computer Scientists in Germany (GCI) Annual Conference
 Lahnstein, Germany
- Sep. 2008 **Instance-based label ranking**
 Student Talk, the 10th Machine Learning Summer School (MLSS-08)
 Ile De Re, France *MLSS scholarship*
- Mar. 2007 **A brief introduction to preference handling**
 Colloquium for Graduate Students in Mathematics and Computer Science
 Philipps University Marburg
 Marburg, Germany

ACADEMIC ACTIVITIES

- Membership** Association for Advancement of Artificial Intelligence (AAAI)
 Association for Computational Linguistics (ACL)
 Association for Computing Machinery (ACM)
 Association of Chinese Computer Scientists in Germany (GCI)
 Institute of Electrical and Electronics Engineers (IEEE)
 International Machine Learning Society (IMLS)
- Grant reviews** Amazon Research Award (formerly Amazon Academic Research Award)
 AWS Machine Learning Research Awards
 AWS Cloud Credits for Research (formerly AWS Research Grants)
 National Science Centre Poland
- Journal reviews** ACM Transactions on Information Systems, ACM
 ACM Transactions on Knowledge Discovery from Data, ACM
 Advances in Data Analysis and Classification, Springer
 Artificial Intelligence, Elsevier
 Computational Intelligence, Wiley
 Communications in Statistics – Simulation and Computation, Taylor & Francis
 Data Mining and Knowledge Discovery, Springer
 Engineering Applications of Artificial Intelligence, Elsevier
 European Journal of Operational Research, Elsevier
 Expert Systems with Applications, Elsevier
 Fuzzy Sets and Systems, Elsevier
 IEEE Access, IEEE
 IEEE Transactions on Cybernetics, IEEE
 IEEE Transactions on Fuzzy Systems, IEEE
 IEEE Transactions on Image Processing, IEEE
 IEEE Transactions on Knowledge and Data Engineering, IEEE
 IEEE Transactions on Neural Networks and Learning Systems, IEEE
 IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE
 Information Retrieval, Springer

Information Sciences, Elsevier
Journal of Algorithms, Elsevier
Journal of Artificial Intelligence Research, AAAI Press
Journal of Machine Learning Research, Microtome Publishing
Knowledge and Information Systems, Springer
Machine Learning, Springer
Mathematical Reviews, AMS
Neural Processing Letters, Springer
Pattern Recognition, Elsevier
Soft Computing, Springer
Statistica Sinica, Academia Sinica
Theory of Computing Systems, Springer
Transactions on Machine Learning Research
Uncertainty, Fuzziness and Knowledge-Based Systems, World Scientific

Conference reviews

Annual Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics (AAACL)
2023 2022 2020

Asian Conference on Machine Learning (ACML)
2023 2022 2021 2020 2019

Annual Conference on Neural Information Processing Systems (NIPS)
2023 2022 2021 2019 2018 2017 2016 2015 2014 2012

Annual Conference of the Association for Computational Linguistics (ACL)
2023 2022 2021(area chair) 2020

International Conference on Artificial Intelligence and Statistics (AISTATS)
2023 2022 2021 2020 2019 2017

International Conference on Learning Representations (ICLR)
2023 2022 2021 2020 2019 2018

Empirical Methods in Natural Language Processing (EMNLP)
2022 2021 2020(area chair) 2019(area chair)

International Conference on Machine Learning (ICML)
2022 2019 2018 2017 2016 2015 2012 2010

Conference on Uncertainty in Artificial Intelligence (UAI)
2022 2021

AAAI Conference on Artificial Intelligence (AAAI)
2022(senior PC) 2021(senior PC) 2020 2019 2018

Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT)
2022 2021 2019 2018

Workshop on Fact Extraction and Verification (FEVER)
2021 2019 2018

International Semantic Web Conference (ISWC)
2020 2019 2018 2017 2016

International Joint Conference on Artificial Intelligence (IJCAI)
2020 2019(senior PC) 2018 2017 2013

European Conference on Machine Learning and Principles and Practice of Knowledge
Discovery in Databases (ECMLPKDD)
2018 2017 2016 2015 2014 2013 2012 2011 2009

From Multiple Criteria Decision Aid to Preference Learning (DA2PL)
2018 2016

European Conference on Artificial Intelligence (ECAI)
2018 2012

Conference on Technologies and Applications of Artificial Intelligence (TAAI)
2016 2015 2013

International Conference on Genome Informatics (GIW)
2016

Knowledge Discovery and Data Mining Meets Linked Open Data workshop at Ex-
tended Semantic Web Conference (ESWC)
2016 2015 2013 2012

Workshop on Machine Learning, Optimization and Big Data (MOD)
2015

International Conference on Discovery Science (DS)
2013

International Conference on Information Processing and Management of Uncertainty
in Knowledge-Based Systems (IPMU)
2012

SIAM International Conference on Data Mining (SDM)
2012

Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)
2012

ACM Conference on Information and Knowledge Management (CIKM)
2011 2010

International Conference on Scalable Uncertainty Management (SUM)
2011

European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty (ECSQARU)
2011

IEEE International Conference on Data Mining (IEEEICDM)
2010 2009

International Conference on Parallel Problem Solving from Nature (PPSN)
2010

Industrial Conference on Data Mining (ICDM)
2010

Annual Convention of the Society for the Study of Artificial Intelligence and Simulation of Behaviour (AISB)
2010

IEEE International Conference on Data Engineering (ICDE)
2010

Preference Learning workshop at European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD)
2009 2008

International Fuzzy Systems Association World Congress and European Society for Fuzzy Logic and Technology Conference (IFSA-EUSFLAT)
2009

Annual Conference on Artificial Intelligence (KI)
2009

International Symposium on Intelligent Data Analysis (IDA)
2009

IEEE Symposium on Computational Intelligence and Data Mining (CIDM)
2009

Annual Conference of the German Classification Society (GfKI)
2008

International Conference on Very Large Data Bases (VLDB)
2008

Teaching

2008 – 2010 Lecture of Machine Learning, Philipps University Marburg

Supervised interns & students

2021 Yahui Liu, University of Trento
Continuous pre-training with in-domain data and curriculum learning for fine-tuning QA models

- 2020 Sean Chung, University of Wisconsin-Madison
Improving retrieval for product questions using search log data
- 2019 Jamin Shin, Hong Kong University of Science & Technology
Model-agnostic meta learning for question answering
- 2019 Sven Buechel, Friedrich-Schiller University Jena
Speeding up BERT by pruning
- 2019 Ida Szubert, University of Edinburgh
Evidence aggregation for question answering
- 2018 Michael Schlichtkrull, University of Edinburgh
Generating diverse questions from text with variational autoencoder
- 2017 Joachim Bingel & Mareike Hartmann, University of Copenhagen
Joint question and answer generation from Amazon customer reviews
- 2017 Arthur Bražinskas, University of Amsterdam
Neural open information extraction
- 2017 Nam Khanh Tran, L3S Research Center & Leibniz University Hannover
Multiplicative tree-structured LSTMs
- 2016 Nedelina Teneva, University of Chicago
Keyphrase extraction with topic modeling
- 2015 Rebecca Knowles, Johns Hopkins University (co-supervised with György Szarvas)
Helpfulness estimation of Amazon customer reviews

LINKS

- Research <http://www.weiweicheng.com/research/>
- Video lectures <http://www.weiweicheng.com/videos.htm>