

Weiwei Cheng

Curriculum Vitae

weiwei.cheng@outlook.com

WORK EXPERIENCE

Full-time positions

- | | |
|-------------|---|
| 2023 – now | Senior principal scientist E-commerce Platform 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

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| 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 |

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| 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

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|-------------|--|
| 2007 – 2012 | PhD magna cum laude in Computer Science (Dr. rer. nat.) <i>China national award</i> 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 <i>best graduate award</i> 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

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

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

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| | 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

| | |
|-----------|--|
| Aug. 2024 | Antonis Maronikolakis, Ana Peleteiro Ramallo, Weiwei Cheng, Thomas Kober What should I wear to a party in a Greek taverna? Evaluation for conversational agents in the fashion domain Workshop Proceedings of Evaluation and Trustworthiness of Generative AI Models 2024 (GENAI-EVAL-24) The 30th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD-24) Barcelona, Spain |
| May 2022 | Xiaoyu Shen, Gianni Barlacchi, Marco Del Tredici, Weiwei Cheng, Adrià de Gispert semiPQA: a study on product question answering over semi-structured data Proceedings of the 5th Workshop on E-Commerce and NLP (ECNLP-22): 111-120, ACL Dublin, Ireland |

- May 2022 Xiaoyu Shen, Gianni Barlacchi, Marco Del Tredici, Weiwei Cheng, Adrià de Gispert, Bill Byrne
Product answer generation from heterogeneous sources: a new benchmark and best practices
 Proceedings of the 5th Workshop on E-Commerce and NLP (ECNLP-22): 99-110, ACL Dublin, Ireland
- 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 iter-
 ation 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 proba-
 bility 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

| | |
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| 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. 2024 **Enhancing fashion e-commerce with cutting-edge AI, powered by AWS**
AWS Data & AI Day
Berlin, Germany

May 2024 **Innovate faster with generative AI**
AWS Summit Berlin
Berlin, Germany

Jul. 2023 **Generative AI and its applications**
Zalando Senior Leadership Team Exchange
Berlin, Germany

Sep. 2017 **Salience Rank: keyphrase extraction with topic modeling**
Data Science Luxembourg
Luxembourg City, Luxembourg

May 2017 **Salience 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

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| 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 classification 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 <i>MLSS scholarship</i> |
| 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 |
| | Journal of Global Optimization, Springer |
| | 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 on Neural Information Processing Systems (NIPS)
2024 2023 2022 2021 2019 2018 2017 2016 2015 2014 2012

European Conference on Machine Learning and Principles and Practice of Knowledge
Discovery in Databases (ECMLPKDD)
2024 2018 2017 2016 2015 2014 2013 2012 2011 2009

International Conference on Learning Representations (ICLR)
2024 2023 2022 2021 2020 2019 2018

International Conference on Artificial Intelligence and Statistics (AISTATS)
2024 2023 2022 2021 2020 2019 2017

Workshop on Recommender Systems for Fashion (FASHIONXRECSYS)
2023

Empirical Methods in Natural Language Processing (EMNLP)
2023 2022 2021 2020(area chair) 2019(area chair)

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

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

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

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 Computa-
tional 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

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 Extended 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 |