Dakuo Wang

Curriculum Vitae

Associate Professor at Northeastern University
/ Visiting Scholar at Stanford
239 Ryder Hall, Northeastern University
Boston, MA 02115

+1 949-864-6661
d.wang@northeastern.com
www.dakuowang.com

RESEARCH INTERESTS

Human-computer interaction, human-AI collaboration, natural language processing, health informatics, data science, computer-supported cooperative work

EDUCATION

Ph.D., Information and Computer Science, University of California Irvine, U.S.A.   2016
Dissertation: *Exploring and Supporting Today's Collaborative Writing*
Committee: Judith S. Olson (Chair), Gary M. Olson, Daniel Russell (Google)

Master of Science, Information and Computer Science**,** University of California Irvine, U.S.A.   2016

Master of Science, Electrical and Computer Engineering**,** University of California Irvine, U.S.A.   2012

Diplôme d'Ingénieur, Système d'Informatique**,** Ecole Centrale d'Electronique Paris, FRANCE   2010

Bachelor of Science, Computer Science, Beijing University of Technology, CHINA   2009

APPOINTMENTS

Northeastern University, Associate Professor, Boston, MA, U.S.A**.**   2023 — Present

Stanford University, Visiting Scholar, Stanford, CA, U.S.A**.**   2022 — Present

Northeastern University, Adjunct Faculty, Boston, MA, U.S.A**.**   2021 — 2022

MIT-IBM Watson AI Lab, Principal Investigator, Cambridge, MA, U.S.A.   2019 — 2022

IBM Research, Research Team Lead, Cambridge, MA, U.S.A.   2018 — 2022

IBM T.J. Watson Research, Research Staff Member, Yorktown Heights, NY, U.S.A.   2016 — 2018

IBM China Research Lab, Research Intern, BEIJING, CHINA   Summer 2013

University of California Irvine, Research Assistant, CA, U.S.A.   2012 — 2016

France Telecom, System Engineer Intern, PARIS, FRANCE   2009 — 2011

FELLOWSHIPS, GRANTS & AWARDS

"The Goal-oriented Autonomous Dialogue System", RPI-IBM AI Research Collaboration (PI with Tomek Strzalkowski $125,000)	2022
IBM Corporate Technical Awards on "AutoAI", IBM. 175/350,000	2021
Outstanding Technical Achievement Award "Leadership in Automating the AI Lifecycle", IBM Research. 16/260	2020
Outstanding Technical Achievement Award "Author Workbench", IBM Research. 16/260	2020
"Human-in-the-loop Automated Machine Learning", MIT-IBM Watson AI Lab (PI with David Karger $150,000)	2019
ACM Conference on Human Factors in Computing Systems (CHI), Early Career Consortium ($2,000)	2017
ACM Conference on Human Factors in Computing Systems (CHI), Doctoral Consortium ($2,000)	2016
ACM Conference on Computer-Supported Cooperative Work (CSCW), Doctoral Consortium ($2,000)	2016
iConference, Doctoral Consortium ($1,500)	2016
Center for Organizational Research Grant ($1,000)	2014 — 2015
1st Place at Google Web Hackathon @ UCI	March 2015

OTHER PROFESSIONAL ACTIVITIES & SERVICE

Steering Committee

ACM SIGCHI China Chapter Steering Committee Vice-President	2019 -- 2022
International Chinese Association of CHI (ICACHI) Steering Committee	2018 -- 2022
CCF Technical Committee of HCI	2018 -- Present
CCF Technical Committee of Cooperative Computing	2018 – Present

Conference Organizing Committee

ACM IUI 2024 Conference Co-Chair in Proceeding	2024
AAAI ICWSM 2023 Tutorial Chair	2023
ACM IUI 2023 Conference Co-Chair in Proceeding	2023
ACM CHI 2023 Conference Co-Chair in Workshop	2023
AAAI ICWSM 2022 Global Equity Chair	2022
ACM CHI 2022 Conference Co-Chair in Special Interest Group	2022
ACM CSCW 2022 Conference Co-Chair in Sponsorship	2022
AAAI ICWSM 2021 Global Equity Chair	2021
ACM CSCW 2020 Conference Co-Chair in Demo	2020
ECSCW 2020 Conference Co-Chair in Sponsorship	2020
ACM GROUP 2020 Conference Co-Chair in Workshop	2020
ACM CHI 2019 Conference Co-Chair in Social Media	2019

Conference Service
Program Committee (Associate/Area Chair) for ACM CHI'16, 17, 18, 19, 20, 21;
Program Committee (Associate/Area Chair) for ACM CSCW'16, 17, 18, 19, 20, 21, 22;
Reviewer for 100+ papers CHI, CSCW, ECSCW, GROUP, HRI, UIST, IUI, iConference …

Memberships in Professional Associations
Senior Member in Institute of Electrical and Electronics Engineers (IEEE)
Senior Member in Association for Computer Machinery (ACM): Special Interest Group in
Computer-Human Interaction (SIGCHI)

PUBLICATIONS

Papers in Submission (* Equal Contribution)

[U4] **Wang, D.,** et al. How Much Automation Do Data Science Workers Need? Submitted to *Patterns*

[U3] Zhang, S. et al. DeepShovel: An Online Collaborative Platform for Data Extraction in Geoscience Literature with AI Assistance. Submitted to CSCW'22

[U2] Zhu, Q.*, **Wang, D.*,** et al. Human-Assisted vs. AI-Assisted Feature Engineering: Users' Perceptions Towards Collaborative Feature Engineering in Data Science Work. Submitted to *CSCW'22*

[U1] Sun, Y., Valente, A., Liu, S. & **Wang, D.** Preserve, Promote, or Attack? GNN Explanation via Topology Perturbation. Submitted to *AAAI'22*

Journal Publications (Peer Reviewed, * Equal Contribution)

[J8] Wu, Q., Sang, Y., **Wang, D.,** & Lu, Z. (2023) Malicious Selling Strategies in E-Commerce Livestream: A Case Study of Alibaba's Taobao and ByteDance's TikTok. *ACM Trans. on Computer-Human Interaction*.

[J7] Wang, A.*, **Wang, D.*,** Drozal, J., Muller, M., Park, S., Weisz, J., Liu, X., & Wu, L. (2022) Documentation Matters: Human-Centered AI System to Assist Data Science Code Documentation in Computational Notebooks. *ACM Trans. on Computer-Human Interaction*. 24, 1.

[J6] Zhang, Z., Genc, Y. **Wang, D.,** Ahsen, M. & Fan, X. (2021) Effect of AI Explanations on Human Perceptions of Patient-Facing AI-Powered Healthcare Systems. *Journal of Medical Systems,* 45(6), 1-10.

[J5] Fan, X., Chao, D., Zhang, Z., **Wang, D.,** Li, X., & Tian, F. (2021). Utilization of Self-Diagnosis Health Chatbots in Real-World Settings: Case Study. *Journal of Medical Internet Research,* 23(1), e19928.

[J4] Xu, Y., **Wang, D.,** Collins, P., Lee, H., & Warschauer, M. (2021). Same benefits, different communication patterns: Comparing Children's reading with a conversational agent vs. a human partner. *Computers & Education*, 161, 104059.

[J3] Zhang, Z., Genc, Y., Xing, A., **Wang, D.,** Fan, X., & Citardi, D. (2020). Lay individuals' perceptions of artificial intelligence (AI)‐empowered healthcare systems. *Proceedings of the Association for Information Science and Technology*, 57(1).

[J2] Olson, J. S., **Wang, D.,** Zhang, J., & Olson, G. M. (2017). How People Write Together Now: Beginning the Investigation with Advanced Undergraduates in a Project Course. *ACM Trans. on Computer-Human Interaction*. 24, 1.

[J1] **Wang, D.** and Mark, G. (2015). Internet Censorship in China: Examining User Awareness and Attitudes. *ACM Trans. on Computer-Human Interaction*. 22, 6, Article 31 (November 2015), 22pages. DOI=http://dx.doi.org/10.1145/2818997

Conference Publications (Peer Reviewed, * Equal Contribution)

[C38] Lam, M., Li, A., Freitas, I., Ma, Z., **Wang, D.,** Landay, J., & Bernstein, M. (2023). Model Sketching: Centering Concepts in Early-Stage Machine Learning Model Design. *CHI'23*

[C37] Jahanbakhsh, F., Katsis, Y., **Wang, D.,** Popa, L., & Muller, M. (2023). Exploring the Use of Personalized AI for Identifying Misinformation on Social Media. *CHI'23*

[C36] Sang, Y., Mou, X., Yu, M., Li, J., **Wang, D.**, & Stanton, J. (2022). MBTI Personality Prediction for Fictional Characters Using Movie Scripts. *EMNLP'22 Findings*

[C35] Sanders, A., Strzalkowski, T., Si, M., Chang, A., Dey, D., Braasch, J., & **Wang, D.** (2022). Towards a Progression-Aware Autonomous Dialogue Agent. *NAACL'22*

[C34] Xie, Y.*, **Wang, D.*,** et al. (2022). A Word is Worth A Thousand Dollars: Adversarial Attack on Tweets Fools Meme Stock Prediction. *NAACL'22*

[C33] Zhang, Z., et al. (2022). StoryBuddy: A Human-AI Collaborative Chatbot for Parent-Child Interactive Storytelling with Flexible Parental Involvement. *CHI'22*

[C32] Zheng, C.*, **Wang, D.*,** et al. (2022). Telling Stories from Computational Notebooks: AI-Assisted Presentation Slides Creation for Presenting Data Science Work. *CHI'22*

[C31] Zhao, Z., Hou, Y., **Wang, D.*,** et al. (2022). Educational Question Generation of Children Storybooks via Question Type Distribution Learning and Event-Centric Summarization. *ACL'22*

[C30] Yao, B.*, **Wang, D.*,** et al. (2022). It is AI's Turn to Ask Humans a Question: Question and Answer Pair Generation for Children Storybooks in FairytaleQA Dataset. *ACL'22*

[C29] Xu, Y.*, **Wang, D.*,** et al. (2022). FairytaleQA: A Dataset for Children Storybook Reading Comprehension and Question Answering. *ACL'22*

[C28] **Wang, D.** et al. (2022). Organizational Distance Also Matters: How Organizational Distance Among Industrial Research Teams Affect Their Research Productivity. *CSCW 2022.*

[C27] **Wang, D.** et al. (2022). Group Chat Channel Ecology in Enterprise Instant Messaging: How Employees Collaborate Through Multi-User Group Chat Channels on Slack. *CSCW 2022*.

[C26] Liu, X*., **Wang, D.*,** Wang, A., Hou, Y., & Wu, L. (2021). HAConvGNN: Hierarchical Attention Based Convolutional Graph Neural Network for Code Documentation Generation in Jupyter Notebooks. *EMNLP 2021 Findings*.

[C25] Sun, E., Hou, Y., **Wang, D.,** Zhang, Y., & Wang, NXR. (2021). D2S: Document-to-Slide Generation Via Query-Based Text Summarization. *NAACL 2021*.

[C24] Wang, L.*, **Wang, D.*,** Tian, F., Peng, Z., Fan, X., Zhang, Z., ... & Wang, H. (2021). CASS: Towards Building a Social-Support Chatbot for Online Health Community. *CSCW 2021*.

[C23] **Wang, D.,** Wang, L., Zhang, Z., Wang, D., Zhu, H., Gao, Y., et al. (2021). "Brilliant AI Doctor" in Rural China: Tensions and Challenges in AI-Powered CDSS Deployment. *CHI 2021*.

[C22] **Wang, D.,** Andres, J., Weisz, J., Oduor, E., & Dugan, C. (2021). AutoDS: Towards Human-Centered Automation of Data Science. *CHI 2021*.

[C21] Piorkowski, D., Park, S., Wang, A. Y., **Wang, D**., Muller, M., & Portnoy, F. (2021). How AI Developers Overcome Communication Challenges in a Multidisciplinary Team: A Case Study. *CSCW 2021*

[C20] Narkar, S., Zhang, Y., Liao, Q. V., **Wang, D.,** & Weisz, J. D. (2021). Model LineUpper: Supporting Interactive Model Comparison at Multiple Levels for AutoML. *IUI 2021*.

[C19] Dozaral, J., Weisz, J., **Wang, D.,** Dass, G., Yao, B., Zhao, C., Muller, M., Ju, L., Su, H. (2020). Exploring Information Needs for Establishing Trust in Automated Data Science Systems. *IUI 2020.*

[C18] Karl, D., Weisz, J., Oduor, E., Muller, M., Andres, J., Gray, A., **Wang, D.** (2020). Opening the Blackbox of Automated Artificial Intelligence with Conditional Parallel Coordinates. *IUI 2020.*

[C17] Floyd, F. et al. (2020). Next Steps for Human-Computer Integration: Challenges and Opportunities. *CHI 2020.*

[C16] Zhang, A., Muller, M., **Wang, D.** (2020) How Do Data Science Workers Collaborate? Roles, Workflows, and Tools. *CSCW 2020.*

[C15] Liu, S., et al. (2020) An ADMM Based Framework for AutoML Pipeline Configuration. *AAAI 2020.*

[C14] Mao, Y.*, **Wang, D.*** et al. (2019). To Ask The Right Question Or To Find The Right Answer From Data? Collaborations Between Data Scientists and Bio-Medical Scientists in Data-Centric Open Science Projects. *GROUP 2020.*

[C13] Tan, M.*, **Wang, D.***, et al. (2019) Context-Aware Conversation Thread Detection in Multi-Party Chat. *EMNLP 2019*.

[C12] Tan, M., Yu, Y., Wang, H., **Wang, D.,** Potdar, S., Chang, Shi., Yu, M. (2019) Out-of-Domain Detection for Low-Resource Text Classification Tasks. *EMNLP 2019*.

[C11] Tian, F., Fan, X., Fan, J., Zhu, Y., Gao, J., **Wang, D.,** Wang, H. (2019). What Can Gestures Tell?: Detecting Motor Impairment in Early Parkinson's from Common Touch Gestural Interactions. *CHI 2019*.

[C10] **Wang, D.** et al. (2019). Human-AI Collaboration in Data Science: Exploring Data Scientists' Perceptions of Automated AI. *CSCW 2019*.

[C9] Wang, H., et al. (2019). Extracting Multiple-Relations in One-Pass with Pre-Trained Transformers. *ACL 2019.*

[C8] Muller, M., Lange, I., **Wang, D.,** Piorkowski, D., Tsay, J., Liao, QV., Dugan, C. (2019). How Data Science Workers Work with Data: Discovery, Capture, Curation, Design, Creation. *CHI 2019*.

[C7] Shamekhi, A., Liao, QV., **Wang, D.,** Bellamy, RKE., Erickson, T. (2018). Face Value? Exploring the Effects of Embodiment for a Group Facilitation Agent. *CHI 2018*.

[C6] Liao, QV., Hussain, M., Chandar, P., Davis, M., Crasso, M., **Wang, D.,** Muller, M., Geyer, W. (2018). All Work and no Play? Conversations with a Question-and-Answer Chatbot in the Wild. *CHI 2018.*

[C5] **Wang, D.,** Tan, H., & Lu, T. (2018). Why Users Do Not Want to Write Together When They Are Writing Together: Users' Rationales for Today's Collaborative Writing Practices. *CSCW 2018*.
Best Paper Honorable Mention. 5%.

[C4] Hou Y., & **Wang, D**. (2018). Hacking with NPOs: Collaborative Analytics and Broker Roles in Civic Data Hackathons. *CSCW 2018*
Best Paper Award. 1%.

[C3] Yim, S., **Wang, D.,** Olson, J. S., Vu, V., & Warschauer, M. (2017). Synchronous Writing in the Classroom: Undergraduates' Collaborative Practives and their Impact on Text Quality, Quantity, and Style. *CSCW 2017*.

[C2] **Wang, D.,** Hou, Y., Luo, L., & Pan, Y. (2016). Answerer Engagement in an Enterprise Social Question & Answering System. *iConference 2016*.

[C1] **Wang, D.** et al. (2015). DocuViz: Visualizing Collaborative Writing. *CHI 2015.*

Short Papers & Workshop Organizers (Peer Reviewed)

[W11] Wang, A., **Wang, D.**, Liu, X., & Wu, L. (2021) Graph-Augmented Code Summarization in Computational Notebooks. *IJCAI'21 Demo*.

[W10] Lam, HT., et al. (2021) Automated Data Science for Relational Data. In *IEEE 37th International Conference on Data Engineering (ICDE).*

[W9] Afzal, S., Chaudhary, A., Gupta, N., Patel, H., Spina, C., & **Wang, D.** (2021) Data-Debugging Through Interactive Visual Explanations. In *PA-KDD 2021*.

[W8] Wang, A., **Wang, D.,** Drozdal, J., Liu, X., Park, S., Oney, S., & Brooks, C. (2021) What Makes a Well-Documented Notebook? A Case Study of Data Scientists' Documentation Practices in Kaggle. In *CHI 2021 Extended Abstract.*

[W7] **Wang, D.,** Maes, P., Ren, X., Shneiderman, B., Shi, Y., & Wang, Q. (2021). Designing AI to Work WITH or FOR People? In *CHI 2021 Extended Abstract.*

[W6] Chaudhary, A., Issak, A., Kate, K., Katsis, Y., Valente, A., **Wang, D.**, et al. (2021). AutoText: An End-to-End AutoAI Framework for Text. In *AAAI 2021 Demo.*

[W5] **Wang, D.,** Churchill, E., Maes, P., Fan, X., Shneiderman, B., Shi, Y., & Wang, Q. (2020). From Human-Human Collaboration to Human-AI Collaboration: Designing AI Systems That Can Work Together with People. In *CHI 2020 Extended Abstract*.

[W4] **Wang, D.,** et al. (2020). AutoAI: Automating the End-to-End AI Lifecycle with Humans-in-the-Loop. In *IUI'20 Companion*.

[W3] Fan, X., Yao, J., Tu, H., & **Wang, D.** (2020). ChineseCHI 2020 Workshop at CHI. *In CHI 2020. ACM*.

[W2] Jacques, R., Følstad, A., Gerber, E., Grudin, J., Luger, E., Monroy-Hernández, A., & **Wang, D.** (2019). Conversational Agents: Acting on the Wave of Research and Development. *In CHI 2019 Extended Abstract. ACM*.

[W1] Tian, F., Ren, X., Fan, X., Li, W., Mi, H., Lu, T. & **Wang, D.** (2019). HCI in China: Research Agenda, Education Curriculum, Industry Partnership, and Communities Building. *In CHI 2019 Extended Abstract. ACM*.

PATENTS

[P53] Bo Wu, Chuang Gan, Zhenfang Chen, **Dakuo Wang**. Transformers for Real-World Video Question Answering. IBM. To be filed 2021. P202104435

[P52] **Dakuo Wang**, Udayan Khurana, Chuang Gan, Gregory Bramble, Abel Valente, Arunima Chaudhary, Carolina Maria Spina, Micah Smith. System and Method to Integrate Human and AI for Automated Feature Engineering. IBM. To be filed 2021. P202103872

[P51] Daniel Weidele, Lisa Amini, Udayan Khurana, Takaaki Tateishi, Toshihiro Takahashi, Horst Samulowitz, Kavitha Sriniva, **Dakuo Wang**, Abel Valente, Arunima Chaudhary, Carolina Spina. Visualization for Data Table Knowledge Graph and Interactive Feature Suggestion. IBM. To be filed 2021. P202103698

[P50] **Dakuo Wang**, ANBANG XU, Mo Yu, Chuang Gan, Xiaotong LIU, Haibin Liu. Automated Generation of AIOps Dialogue Flow from Documents. IBM. To be filed 2021. P202103697

[P49] **Dakuo Wang**, Mo Yu, Chuang Gan, ANBANG XU, Xiaotong LIU, Haibin Liu. System and Method for Generating AIOps Question Answer Pairs from IT Documents. IBM. To be filed 2021. P202103696

[P48] Bo Wu, Chuang Gan, **Dakuo Wang**, Zhenfang Chen. NEURAL-SYMBOLIC ACTION TRANSFORMERS FOR VIDEO QUESTION ANSWERING. IBM. Filed 2021. 17/381408

[P47] **Dakuo Wang**, Udayan Khurana, Daniel Karl I. Weidele, Arunima Chaudhary, Carolina Maria Spina, Abel Valente, Chuang Gan, Horst Cornelius Samulowitz, Lisa Amini. INTERACTIVE FEATURE ENGINEERING IN AUTOMATIC MACHINE LEARNING WITH DOMAIN KNOWLEDGE. IBM. Filed 2021. 17/317242

[P46] Bo Wu, Chuang Gan, **Dakuo Wang**, Kaizhi Qian. SKELETON-BASED ACTION RECOGNITION USING BI-DIRECTIONAL SPATIAL-TEMPORAL TRANSFORMER. IBM. Filed 2021. 17/315319

[P45] **Dakuo Wang**, Mo Yu, Chuang Gan, Bo Wu. AUTOMATED CONVERSATIONAL RESPONSE GENERATION. IBM. Filed 2021. 17/307175

[P44] **Dakuo Wang**, Mo Yu, Chuang Gan, Saloni Potdar. GENERATING QUESTION ANSWER PAIRS. IBM. Filed 2021. 17/302550

[P43] **Dakuo Wang**, Yufang Hou, Xin Ru Wang, Yunfeng Zhang, Chuang Gan, Edward Sun. AUTOMATIC GENERATION OF PRESENTATION SLIDES FROM DOCUMENTS. IBM. Filed 2021. 17/181397

[P42] Chuang Gan, **Dakuo Wang**, Antonio Jose Jimeno Yepes, Bo Wu. UNSUPERVISED VIDEO REPRESENTATION LEARNING. IBM. Filed 2021. 17/216605

[P41] **Dakuo Wang**, Kiran A Kate, Arunima Chaudhary, Abel Valente, Ioannis Katsis, Chuang Gan, Bei Chen. Hybrid Model and Architecture Search for Automated Machine Learning Systems. IBM. Filed 2021. 17/207664

[P40] LINGFEI WU, Lei Yu, Chen Wang, **Dakuo Wang**. VISUAL QUESTION GENERATION WITH ANSWER-AWARENESS AND REGION-REFERENCE. IBM. Filed 2020. 17/163268

[P39] Bo Wu, Chuang Gan, Tengfei Ma, **Dakuo Wang**. Video Synthesis via Transform-based Tensor Neural Network. IBM. Filed 2020.

[P38] Bei Chen, **Dakuo Wang**, Martin Wistuba, Beat Buesser, Long VU, Chuang Gan, Mathieu Sinn. AUTOMATED DEEP LEARNING ARCHITECTURE SELECTION FOR TIME SERIES PREDICTION WITH USER INTERACTION. IBM. Filed 2020. 17/106966

[P37] **Dakuo Wang**, Sijia Liu, Abel Valente, Chuang Gan, Bei Chen, Dongyu Liu, Yi Sun. INTERPRETABLE VISUALIZATION SYSTEM FOR GRAPH NEURAL NETWORK. IBM. Filed 2020. 17/039989

[P36] Bo Wu, Chuang Gan, Yang Zhang, **Dakuo Wang**. COARSE-TO-FINE ATTENTION NETWORKS FOR LIGHT SIGNAL DETECTION AND RECOGNITION. IBM. Field 2020. 17/012463

[P35] **Dakuo Wang**, LINGFEI WU, Xuye Liu, Yi Wang, Chuang Gan, Jing Xu, Xue Ying Zhang, Jun Wang, Jing James Xu. LEARNING-BASED AUTOMATED MACHINE LEARNING CODE ANNOTATION WITH GRAPH NEURAL NETWORK. IBM. Filed 2020. 17/088018.

[P34] **Dakuo Wang**, LINGFEI WU, Yi Wang, Xuye Liu, Chuang Gan, Si Er Han, Bei Chen, Ji Hui Yang. Learning-Based Automated Machine Learning Code Annotation in Computational Notebooks. IBM. Filed 2020. 17/069402

[P33] Bo Wu, Chuang Gan, **Dakuo Wang**, Rameswar Panda. GRADIENT-EMBEDDED VIDEO ANOMALY DETECTION. IBM. Filed 2020. 17/025639

[P32] Arunima Chaudhary, **Dakuo Wang**, Abel Valente, Carolina Maria Spina, Hima Patel, Nitin Gupta, Gregory Bramble, Horst Cornelius Samulowitz, Sameep Mehta, Theodoros Salonidis, Daniel M. Gruen, Chuang Gan. AUTOMATED DATA QUALITY INSPECTION AND IMPROVEMENT FOR AUTOMATED MACHINE LEARNING. IBM. Filed 2020. 17/104642

[P31] Si Er Han, Bei Chen, Jing Xu, Jing James Xu, Xue Ying Zhang, Jun Wang, Ji Hui Yang, **Dakuo Wang**. INTERACTIVE DECISION TREE MODIFICATION. IBM. Filed 2021.

[P30] Chuang Gan, **Dakuo Wang**, Yang Zhang, Bo Wu, Xiaoxiao Guo. DUAL-MODALITY RELATION NETWORKS FOR AUDIO-VISUAL EVENT LOCALIZATION. IBM. Filed 2020. 16/989387

[P29] **Dakuo Wang**, Chuang Gan, Gregory Bramble, Lisa Amini, Horst Cornelius Samulowitz, Kiran A Kate, Bei Chen, Martin Wistuba, Alexandre Evfimievski, Ioannis Katsis, Yunyao Li, Adelmo Cristiano Innocenza Malossi, Andrea Bartezzaghi, Ban Kawas, Sairam Gurajada, Lucian Popa, Tejaswini Pedapati, Alexander Gray. USING META-LEARNING TO OPTIMIZE AUTOMATIC SELECTION OF MACHINE LEARNING PIPELINES. IBM. Filed 2020. 16/990965

[P28] Arunima Chaudhary, **Dakuo Wang**, David John Piorkowski, Daniel M. Gruen, Chuang Gan, Peter Daniel Kirchner, Gregory Bramble, Bei Chen, Abel Valente, Carolina Maria Spina, John Thomas Richards, Abhishek Bhandwaldar. AUTOMATED ANALYSIS GENERATION FOR MACHINE LEARNING SYSTEM. IBM. Filed 2020. 17/020299

[P27] **Dakuo Wang**, Arunima Chaudhary, Ji Hui Yang, Bei Chen, Gregory Bramble, Chuang Gan, Uri Kartoun, Long VU. AUTOMATED MODEL PIPELINE GENERATION WITH ENTITY MONITORING, INTERACTION, AND INTERVENTION. IBM. Filed 2020. 16/994923

[P26] Long VU, Bei Chen, Xuan-Hong Dang, Peter Daniel Kirchner, SYED YOUSAF SHAH, Dhavalkumar C. Patel, Si Er Han, Ji Hui Yang, Jun Wang, Jing James Xu, **Dakuo Wang**, Gregory Bramble, Horst Cornelius Samulowitz, Saket Sathe, Wesley M. Gifford, Petros ZERFOS. System and method for automated time series forecasting pipeline generation with data allocation and data caching. IBM. Filed 2021. 63/200168

[P25] Bei Chen, Long VU, SYED YOUSAF SHAH, Xuan-Hong Dang, Peter Daniel Kirchner, Si Er Han, Ji Hui Yang, Jun Wang, Jing James Xu, **Dakuo Wang**, Dhavalkumar C. Patel, Gregory Bramble, Horst Cornelius Samulowitz, Saket Sathe, Chuang Gan. AUTOMATED MACHINE LEARNING PIPELINE GENERATION. IBM. Filed 2020. 16/942247

[P24] **Dakuo Wang**, Bei Chen, Ji Hui Yang, Abel Valente, Arunima Chaudhary, Chuang Gan, John Dillon Eversman, Voranouth Supadulya, Daniel Karl I. Weidele, Jun Wang, Jing James Xu, Dhavalkumar C. Patel, Long VU, SYED YOUSAF SHAH, Si Er Han. VISUALIZATION OF A MODEL SELECTION PROCESS IN AN AUTOMATED MODEL SELECTION SYSTEM. IBM. Filed 2020. 16/942284

[P23] **Dakuo Wang**, Mo Yu, Arunima Chaudhary, Chuang Gan, Qian Pan, Daniel Karl I. Weidele, Abel Valente, Ji Hui Yang. AUTOMATED DATA TABLE DISCOVERY FOR AUTOMATED MACHINE LEARNING. IBM. Filed 2020. 16/989876

[P22] **Dakuo Wang**, Arunima Chaudhary, Chuang Gan, Mo Yu, Qian Pan, Sijia Liu, Daniel Karl I. Weidele, Abel Valente. AUTOMATIC FORMULATION OF DATA SCIENCE PROBLEM STATEMENTS. IBM. Filed 2020. 16/989882

[P21] Parikshit Ram, **Dakuo Wang**, Deepak Vijaykeerthy, Vaibhav Saxena, Sijia Liu, Arunima Chaudhary, Gregory Bramble, Horst Cornelius Samulowitz, Alexander Gray. MACHINE LEARNING WITH MULTIPLE CONSTRAINTS. IBM. Filed 2020. 17/015243

[P20] Daniel Weidele, Parikshit Ram, **Dakuo Wang**, Abel Valente, Arunima Chaudhary. Conditional Parallel Coordinates for Automated Artificial Intelligence with Constraints. IBM. Filed 2020. 16/832528

[P19] Chuang Gan, Sijia Liu, Subhro Das, **Dakuo Wang**, Yang Zhang. Graph Convolutional Networks for Video Grounding. IBM Filed 2020.

[P18] Yang Zhang, Chuang Gan, **Dakuo Wang**. Generating synchronized sound from videos. IBM. Filed 2020. 16/744471.

[P17] Peter Kirchner, Gregory Bramble, Horst Samulowitz, **Dakuo Wang**, Arunima Chaudhary, Gregory Filla. CODE GENERATION FOR AUTO-AI. IBM Filed 2020. 16/919258

[P16] **Dakuo Wang**, Ming Tan, Chuang Gan, Jason Tsay, Gregory Bramble. TRANSFER LEARNING ACROSS AUTOMATED MACHINE LEARNING SYSTEMS. IBM Filed 2020. 16/806626

[P15] **Dakuo Wang**, Haoyu Wang, Chuang Gan, Ming Tan, Arunima Chaudhary, Lin Ju. A system and method to enable personalized automated machine learning (AutoAI or AutoML) systems with machine learning-based approach. IBM Filed 2020. 16/805019

[P14] Theodoros Salonidis, John Dillon Eversman, **Dakuo Wang**, Alex Swain, GREGORY BRAMBLE, Lin Ju, NICHOLAS MAZZITELLI, Voranouth Supadulya. AUTOMATED ARTIFICIAL INTELLIGENCE RADIAL VISUALIZATION. IBM. Filed 2019. 16/557760.

[P13] Chuang Gan, Ming Tan, Yang Zhang, **Dakuo Wang**. A NEW FRAMEWORK FOR FEW-SHOT TEMPORAL ACTION LOCALIZATION. IBM. Filed 2019. 16/661501.

[P12] **Dakuo Wang**, Ming Tan, Chuang Gan, Haoyu Wang. Summarization of Group Chat Threads. IBM. Filed 2019. 16/595550.

[P11] Ming TAN, Haoyu Wang, **Dakuo Wang**, Chuang Gan. DETERMINATION OF CONVERSATION THREADS IN A MESSAGE CHANNEL BASED ON CONVERSATIONAL FLOW AND SEMANTIC SIMILARITY OF MESSAGES. IBM. Filed 2019. 16/551321.

[P10] Haoyu Wang, Ming TAN, **Dakuo Wang**, Chuang Gan, Saloni Potdar. Light-weight Chatbot Intent Classification Distribution Calibration. IBM. Filed 2019. 16/543117.

[P9] **Dakuo Wang**, Ming TAN, Chuang Gan, Haoyu Wang, Mo Yu. A system and a method to enable natural language interaction with automated machine learning (AutoAI or AutoML) systems. IBM. Filed 2019. 16/551021.

[P8] Yang Zhang, Chuang Gan, Sijia Liu, **Dakuo Wang**. Synchronized Sound Generation from Videos. IBM. Filed 2019. 16/526990.

[P7] **Dakuo Wang**, Ming Tan, Mo Yu, Haoyu Wang, Yupeng Gao, Chuang Gan. CONTEXT-AWARE CONVERSATION THREAD DETECTION FOR COMMUNICATION SESSIONS. IBM. Filed 2019. 16/597937.

[P6] Ming TAN, **Dakuo Wang**, Mo Yu, Haoyu Wang, Yang Yu, Shiyu Chang, Saloni Potdar. Out-of-Domain Detection for Low-Resource Text Classification. IBM. Filed 2019. 16/530457.

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[P4] **Dakuo Wang,** Chuang Gan, Michael Muller, ZIJUN WANG, Daniel M. Gruen. CALCULATING ONLINE SOCIAL NETWORK DISTANCE BETWEEN ENTITIES OF AN ORGANIZATION. IBM. Filed 2019. 16/374398.

[P3] Chuang Gan, **Dakuo Wang**, Sijia Liu, Yang Zhang. Relation Attention Module for Temporal Action Localization. IBM. Filed 2019.

[P2] Chuang Gan, Yang Zhang, Sijia Liu, **Dakuo Wang**. ITERATIVE APPROACH FOR WEAKLY-SUPERVISED ACTION LOCALIZATION. IBM. Filed 2019. 16/292847.

[P1] Sijia Liu, Quanfu Fan, Chuang Gan, **Dakuo Wang**. Quantifying Vulnerabilities of Deep Learning Computing Systems to Adversarial Perturbations. IBM. Filed 2019. 16/296897.

TEACHING & INVITED TALKS

ITC 6020: Systems Analysis & Design   Summer 2022
Instructor at Northeastern University, U.S.A.

ITC 6020: Systems Analysis & Design   Spring 2022
Instructor at Northeastern University, U.S.A.

Designing Human-Centered AI Systems for Human-AI Collaboration   May 2022
Invited Talk at Stanford University, U.S.A.

Designing Human-Centered AI Systems for Human-AI Collaboration   April 2022
Invited Talk at UCSB, U.S.A.

Designing Human-Centered AI Systems for Human-AI Collaboration   April 2022
Invited Talk at University of Maryland College Park, U.S.A.

Designing Human-Centered AI Systems for Human-AI Collaboration   March 2022
Invited Talk at University of Minnesota, U.S.A.

Designing Human-Centered AI Systems for Human-AI Collaboration   March 2022
Invited Talk at Northeastern University, U.S.A.

Fireside Chat on Human-Centered AI   March 2022
Invited Panelist at TaiwanCHI Chapter, Online

Designing Human-Centered AI Systems for Human-AI Collaboration   March 2022
Invited Talk at Michigan State University, U.S.A.

Designing Human-Centered AI Systems for Human-AI Collaboration   March 2022
Invited Talk at Vanderbilt University, U.S.A.

Designing Human-Centered AI Systems for Human-AI Collaboration   February 2022
Invited Guest Lecture at RPI, U.S.A.

Designing Human-Centered AI Systems for Human-AI Collaboration   February 2022
Invited Talk at Ohio State University, U.S.A.

Designing Human-Centered AI Systems for Human-AI Collaboration   February 2022
Invited Talk at Purdue University, U.S.A.

ITC 6020: Systems Analysis & Design (ONLINE)   Winter 2022
Instructor at Northeastern University, Toronto, Canada. Received 4.1/5.0 rating.

ITC 6020: Systems Analysis & Design   Winter 2022
Instructor at Northeastern University, U.S.A. Received 4.6/5.0 rating from student survey.

Human-Centered AI in Data Science   October 2021
Invited Talk at UCLA, U.S.A.

Human-Centered AI in Data Science   October 2021
Invited Talk at UC Irvine, U.S.A.

Human-AI Collaboration in Automated Machine Learning   March 2020
Invited Talk at Pace University, U.S.A.

Human-AI Collaboration   November 2019
Invited Talk at ACM SIGCHI China Chapter 15th Anniversary Symposium at Chinese Academy of Science, China.

Human-AI Collaboration   October 2019
Guest Lecture at Peking University, China. Host: Prof. Baoquan Chen.

Introduction to HCI and CSCW   Summer 2019
CSCW Summer School at Fudan University, China.

Human AI Collaboration in Workplace, Data Science, and Healthcare   Summer 2019
Feature Talk at Human Computer Interaction Consortium (HCIC), Pajaro Dunes, CA

Human-AI Collaboration as a New Paradigm of Human Computer Interaction December 2018
Guest Lecture at Chinese Academy of Science, China. Host: Prof. Xiangmin Fan.

Human-AI Collaboration as a New Paradigm of Human Computer Interaction. Summer 2018
Feature Talk at 14th ChineseCSCW in Guilin, China.

Human AI Collaboration   Summer 2018
Dagstuhl Seminar (17392), Dagstuhl, Germany

Today's and Future's Computer-Supported Cooperative Work   September 2017
Guest Lecture at College of Computer Science, Fudan University, China. Host: Prof. Tun Lu.

Exploring and Supporting Today's Collaborative Writing   Summer 2016
Feature Talk at Human Computer Interaction Consortium (HCIC), Pajaro Dunes, CA

INF 133: Projects in Human Computer Interaction   Spring 2014
Teaching Assistant for Alfred Kobsa. Received 8.11/9.0 overall rating from student survey.

ICS 11: Internet Public Policy   Winter 2014
Teaching Assistant for Geoffrey Bowker. Received 8.10/9.0 overall rating from student survey.

INF 131: User Interaction Software Design   Fall 2013
Teaching Assistant for Donald Patterson.

Introduction to Human Computer Interaction and Computer-Supported Cooperative Work   Summer 2013
Guest Lecture at College of Computer Science, Beijing University of Technology. Host: Hongyu Gao.

Introduction to Human Computer Interaction and Computer-Supported Cooperative Work   Summer 2013
Guest Lecture at the School of Economic and Management, Beijing University of Posts and Telecommunications. Host: Lianju Ning.

ECE 10: Computer Methods in Electrical Computer Engineering   Fall 2011
Teaching Assistant for Phillip Sheu.

MENTORING EXPERIENCE

List of Student Mentees
Farnaz Jahanbakhsh (Ph.D.) MIT   2022
Fan Wang (M.S.) Peking University   2022
Zheng Zhang (Ph.D.) Notre Dame University   2022
Zhenjie Zhao (Ph.D.) HKUST   2021
Chengbo Zheng (Ph.D.) HKUST   2021
Qian Zhu (Ph.D.) HKUST   2021
Bingsheng Arthur Yao (Ph.D.) RPI   2021
Yong Xie (Ph.D.) UIUC   2021
Soyun Park (Ph.D.) MIT   2020
April Yi Wang (Ph.D.) University of Michigan   2020
Xuye Liu (M.S.) RPI   2020
Yifan Gao (M.S.) Stony Brook U.   2019
Liuping Wang (Ph.D.) Chinese Academy of Science.   2019
Shuai Ma (M.S.) Chinese Academy of Science.   2019

Haokuan Hou (B.S.) MIT.   2018
Yaoli Mao (Ph.D.) Columbia University.   2017
Ameneh Shamekhi, (Ph.D.) Northeastern University.   2016
Zichao Yuan, (B.S.) UC Irvine.   2016
Kenny Khoa Pham, (B.S.) UC Irvine.   2015
Trung Nguyen, (B.S.) UC Irvine.   2014
James Vinh, (B.S.) UC Irvine.   2014

SYSTEMS AVAILABLE TO THE PUBLIC

DocuViz2, Chrome Plugin Store.
A Chrome browser plugin that provides visualization for Google Docs revision history.

REFERENCES

Judith S. Olson
Professor Emerita, University of California Irvine
Member of National Academy Engineering, ACM Fellow
jsolson@uci.edu

Michael Muller
Research Staff Member, IBM Research
ACM Distinguished Scientist
michael_muller@us.ibm.com

David Karger
Professor, Massachusetts Institute of Technology
karger@mit.edu

Diyi Yang
Assistant Professor, Georgia Institute of Technology
diyi.yang@cc.gatech.edu

Jonathan Grudin
Principal Researcher, Microsoft Research
ACM Fellow
jgrudin@microsoft.com