Paper ID	Paper Title	Authors
SESSION 1		
	Tuesday, August 16, 10:00 AM-12:00 PM, Room 1 (Recommendation Systems)	
	Persia: An Open, Hybrid System Scaling Deep Learning-based Recommenders up to 100 Trillion Parameters	Xiangru Lian (University of Rochester)*; Binhang Yuan (ETH Zurich); Xuefeng Zhu (Kuaishou Technology); Yulong Wang (Kuaishou Technology); Yongjun He (ETH Zürich); wu honghuan (Kuaishou); Lei Sun (Kuaishou Technology); Haodong Lyu (Kuaishou Technology); Chengjun Liu (Kuaishou Technology); Xing Dong (Kuaishou Technology); Yiqiao Liao (Kuaishou Technology); Mingnan Luo (Kuaishou Technology); Congfei Zhang (Kuaishou Technology); Jingru Xie (Kwai Inc.); Haonan Li (Kuaishou Technology); Lei Chen (Kuaishou Technology); Renjie Huang (Kuaishou Technology); Jianying Lin (Kuaishou); Chengchun Shu (Kuaishou Technology); Xuezhong Qiu (Kuaishou Technology); Zhishan Liu (Kuaishou Technology); Dongying Kong (Kuaishou Technology); Lei Yuan (Kuaishou Technology); Hai Yu (Kuaishou Technology); Sen Yang (Kwai Inc.); Ce Zhang (ETH); Ji Liu (Kwai Inc.)
	Uncovering the Heterogeneous Effects of Preference Diversity on User Activeness: A Dynamic Mixture Model	Yunfei Lu (Huawei)*; Peng Cui (Tsinghua University); Linyun Yu (Bytedance AI Lab); Lei Li (Bytedance); Wenwu Zhu (Tsinghua University)
	Affective Signals in a Social Media Recommender System	Jane Yu (Facebook)*; Yi-Chia Wang (Uber); Lijing Qin (Meta AI); Canton Cristian (Facebook AI); Alon Y Halevy (Facebook)
	Pricing the Long Tail by Explainable Product Aggregation and Monotonic Bandits	Marco Mussi (Politecnico di Milano)*; Gianmarco Genalti (Politecnico di Milano); Francesco Trovò (Politecnico di Milano); Alessandro Nuara (Politecnico di Milano, Italy); Nicola Gatti (Politecnico di Milano); Marcello Restelli (Politecnico di Milano)
	Multi Armed Bandit vs. A/B Tests in E-commence - Confidence Interval and Hypothesis Test Power Perspectives	Ding Xiang (The Home Depot)*; Rebecca West (The Home Depot); Jiaqi Wang (The Home Depot); Xiquan Cui (Homedepot); Jinzhou Huang (The Home Depot)
	Tuesday, August 16, 10:00 AM-12:00 PM, Room 2 (Smart Transportation and Geo)	
	Representative Routes Discovery From Massive Trajectories	Tingting Wang (RMIT University); Shixun Huang (RMIT); Zhifeng Bao (RMIT University)*; J. Shane Culpepper (RMIT University); Reza Arablouei (CSIRO)
	Uncertainty Quantification of Sparse Trip Demand Prediction with Spatial-Temporal Graph	Dingyi Zhuang (MIT)*; Shenhao Wang (MIT); Haris Koutsopoulos (Northeastern University); Jinhua Zhao (MIT)
	Reinforcement Learning-based Placement of Charging Stations in Urban Road Networks	Leonie A von Wahl (Volkswagen Group)*; Nicolas Tempelmeier (Volkswagen AG); Ashutosh Sao (L3S Research Center, Leibniz University Hannover); Elena Demidova (DSIS Research Group, University of Bonn)
	Graph Meta-Reinforcement Learning for Transferable Autonomous Mobility-on-Demand	Daniele Gammelli (Technical University of Denmark (DTU))*; Kaidi Yang (Stanford University); James Harrison (Google); Filipe Rodrigues (Technical University of Denmark (DTU)); Francisco Pereira (DTU); Marco Pavone (Stanford University)
	Downscaling Earth System Models with Deep Learning	Sungwon Park (KAIST)*; Tung Duong Mai (KAIST); Karandeep Singh (Institute for Basic Science); Arjun Babu Nellikkattil (IBS Center for Climate Physics, Pusan National University); Elke CE Zeller (IBS Center for Climate Physics); Meeyoung Cha (Institute for Basic Science)
SESSION 2		
	Tuesday, August 16, 1:30 PM-3:30 PM, Room 1 (Recommendation Systems & E-commerce)	
	Multilingual Taxonomic Web Page Classification for Contextual Targeting at Yahoo	Eric Ye (Yahoo Research)*; Xiao Bai (Yahoo); Neil O'Hare (Yahoo Research); Eliyar Asgarieh (Yahoo Research); Kapil Thadani (Yahoo Research); Francisco Perez-Sorrosal (Yahoo Research); Sujyothi Adiga (Ads - Targeting & Identity Engineering)
	DESCN: Deep Entire Space Cross Networks for Individual Treatment Effect Estimation	kailiang Zhong (Alibaba Group)*; Fengtong Xiao (Alibaba Group); Yan Ren (Alibaba Group); Yaorong Liang (Alibaba Group); Wenqing Yao (Alibaba Group); Xiaofeng Yang (Alibaba Group); Ling Cen (Alibaba Group)
	Deconfounding Duration Bias in Watch-time Prediction for Video Recommendation	Ruohan Zhan (Stanford University)*; Changhua Pei (Alibaba Group); Qiang Su (Kuaishou Technology); Jianfeng WEN (Kuaishou Inc.); Xueliang Wang (University of Science and Technology of China); Guanyu Mu (Kuaishou Inc.); Dong Zheng (Kuaishou Technology); Peng Jiang (Kuaishou Inc.); Kun Gai (AI)
	Automatic Controllable Product Copywriting for E-Commerce	Xiaojie Guo (JD.COM Silicon Valley Research Center)*; Qingkai Zeng (University of Notre Dame); Meng Jiang (University of Notre Dame); Xiao Yun (JD.com); Bo Long (JD.com); Lingfei Wu (JD.COM Silicon Valley Research Center)
	Modeling the Effect of Persuasion Factor on User Decision for Recommendation	Chang Liu (Tsinghua University)*; Chen Gao (Tsinghua University); Yuan Yuan (Tsinghua University); BAI CHEN (Meituan); Lingrui Luo (Meituan); Xiaoyi Du (Meituan); shi xinlei (meituan); Hengliang Luo (Meituan); Depeng Jin (Tsinghua University); Yong Li (Tsinghua University)
	Tuesday, August 16, 1:30 PM-3:30 PM, Room 2 (Geo Information and Failure Detection)	
	Connecting the Hosts: Street-Level IP Geolocation with Graph Neural Networks	Zhiyuan Wang (University of Electronic Science and Technology of China); Wenxuan Zeng (University of Electronic Science and Technology of China); Fan Zhou (School of Information and Software Engineering, University of Electronic Science and Technology of China)*; Goce Trajcevski (Iowa State University); Chunjing Xiao (Henan University); Yong Wang (Zhengzhou Aiwen Tech); Kai Chen (HKUST)
	Physics-Guided Graph Meta Learning for Predicting Water Temperature and Streamflow in Stream Networks	Shengyu Chen (University of Pittsburgh); Jacob Zwart (U.S. geological survey); Xiaowei Jia (University of Pittsburgh)*
	DuARE: Automatic Road Extraction with Aerial Images and Trajectory Data at Baidu Maps	Jianzhong Yang (Baidu); Xiaoqing Ye (baidu); Bin Wu (Beijing Baidu Co,. Ltd); yanlei gu (Beijing Baidu Co,. Ltd); Ziyu Wang (Baidu); Deguo Xia (Baidu); Jizhou Huang (Baidu)*

NENYA: Cascade Reinforcement Learning for Cost-Aware Failure Mitigation at Microsoft 365	Lu Wang (East China Normal University)*; Pu Zhao (Microsoft Research); Chao Du (Microsoft Research); Chuan Luo (Beihang University); Mengna Su (Microsoft); Fangkai Yang (Microsoft Research); yudong Liu (https://www.microsoft.com); Qingwei Lin (Microsoft Research); Paul Wang (Microsoft 365); Yingnong Dang (Microsoft, USA); Hongyu Zhang (University of Newcastle); Saravan Rajmohan (Microsoft 365); Dongmei Zhang (Microsoft Research Asia)
Multi-task Hierarchical Classification for Disk Failure Prediction in Online Service Systems	yudong Liu (https://www.microsoft.com); Hailan Yang (Microsoft); Pu Zhao (Microsoft Research); Minghua Ma (Microsoft Research); Chengwu Wen (Peking University); Hongyu Zhang (University of Newcastle); Chuan Luo (Beihang University); Qingwei Lin (Microsoft Research)*; Chang Yi (Microsoft); Jiaojian Wang (M365); Chenjian Zhang (Microsoft); Paul Wang (Microsoft 365); Yingnong Dang (Microsoft, USA); Saravan Rajmohan (Microsoft 365); Dongmei Zhang (Microsoft Research Asia)

SESSION 3

Tuesday, August 16, 4:00 PM-6:00 PM, Room 1 (Human & Interfaces)

Looper: an end-to-end ML platform for product decisions	Igor L Markov (Meta)*; Hanson Wang (Facebook); Nitya S Kasturi (Facebook); Shaun Singh (Facebook); Mia R Garrard (Facebook); Yin Huang (Facebook); Sze Way Celeste Yuen (Facebook); Sarah Tran (Facebook); Zehui Wang (Facebook); Igor Glotov (Facebook Inc.); Tanvi Gupta (Facebook); Peng Chen (Facebook); Boshuang Huang (Facebook); Xiaowen Xie (Google); Michael Belkin (Facebook); Sal Uryasev (Facebook); Sam Howie (Facebook); Eytan Bakshy (Meta); Norm Zhou (Facebook)
Interpretability, Then What? Editing Machine Learning Models to Reflect Human Knowledge and Values	Zijie J. Wang (Georgia Tech)*; Alex Kale (University of Washington); Harsha Nori (Microsoft); Peter Stella (NYU Langone Health); Mark Nunnally (NYU Langone health); Duen Horng Chau (Georgia Institute of Technology); Mihaela Vorvoreanu (Microsoft); Jennifer Wortman Vaughan (Microsoft Research); Rich Caruana (Microsoft Research)
Promotheus: An End-to-End Machine Learning Framework for Optimizing Markdown in Online Fashion E-commerce	Eleanor Loh (ASOS)*; Jalaj Khandelwal (ASOS); Brian Regan (ASOS); Duncan A. Little (ASOS.com)
Crowdsourcing with Contextual Uncertainty	Viet-An Nguyen (Facebook)*; Peibei Shi (Facebook); Jagdish Ramakrishnan (Facebook); Narjes Torabi (Facebook); Nimar S Arora (Bayesian Logic); Udi Weinsberg (Facebook); Michael Tingley (Facebook)
CausalMTA: Eliminating the User Confounding Bias for Causal Multi-touch Attribution	Di Yao (Institute of Computing Technology, Chinese Academy of Sciences)*; Chang Gong (Institute of Computing Technology, Chinese Academy of Sciences); Lei Zhang (Alibaba); Sheng Chen (Alibaba Group); Jingping Bi (Institute of Computing Technology, Chinese Academy of Sciences)

SESSION 4

Wednesday, August 17, 10:00 AM-12:00 PM, Room 1 (Search & Information Retrieval)

Rax: Composable Learning-to-Rank using JAX	Rolf Jagerman (Google Research)*; Xuanhui Wang (Google); Honglei Zhuang (Google Research); Zhen Qin (Google); Michael Bendersky (Google); Marc Najork (Google)
Multi-Aspect Dense Retrieval	Weize Kong (Google)*; Swaraj Khadanga (Google); Cheng Li (Google); Shaleen Gupta (Google); Mingyang Zhang (Google); Wensong Xu (Google); Michael Bendersky (Google)
A New Generation of Perspective API: Efficient Multilingual Character-level Transformers	Alyssa Lees (Google); Vinh Q Tran (Google)*; Yi Tay (Google); Jeffrey Sorensen (Google); Jai Gupta (Google); Donald Metzler (Google); Lucy Vasserman (Google)
A Graph Learning Based Framework for Billion-Scale Offline User Identification	Daixin Wang (Ant Financial Services Group)*; Zujian Weng (Ant Financial Services Group); Zhengwei Wu (Ant Financial); Zhiqiang Zhang (Ant Group); Peng Cui (Tsinghua University); Hongwei Zhao (Ant Financial Services Group); Jun Zhou (Ant Financial)
RT-VeD: Real-Time VoI Detection on Edge Nodes with an Adaptive Model Selection	Shuai Wang (Southeast University); Junke Lu (Southeast University)*; Baoshen Guo (Southeast University); Zheng Dong (Wayne State University)

Wednesday, August 17, 10:00 AM-12:00 PM, Room 2 (Health Care and Biomedical)

DNA-Stabilized Silver Nanocluster Design via Regularized Variational Autoencoders	Fariha Moomtaheen (University at Albany SUNY); Matthew Killeen (University at Albany-SUNY); James T Oswald (SUNY Albany DMM Lab); Anna Gonzàlez-Rosell (University of California, Irvine); Peter Mastracco (University of California, Irvine); Alexander Gorovits (Regeneron Pharmaceuticals); Stacy Copp (University of California, Irvine); Petko Bogdanov (University at Albany-SUNY)*
What Makes Good Contrastive Learning on Small-Scale Wearable-based Tasks?	Hangwei Qian (Nanyang Technological University)*; Tian Tian (Nanyang Technological University); Chunyan Miao (NTU)
Multiwave COVID-19 Prediction from Social Awareness using Web Search and Mobility Data	Jiawei Xue (Purdue University); Takahiro Yabe (Massachusetts Institute of Technology); Kota Tsubouchi (Yahoo Japan Corporation); Jianzhu Ma (Institute for Artificial Intelligence, Peking University); Satish V. Ukkusuri (Purdue University)*
Counseling Summarization using Mental Health Knowledge Guided Utterance Filtering	ASEEM SRIVASTAVA (IIIT Delhi)*; Tharun Suresh (Indraprastha Institute of Information Technology - Delhi); Sarah P Lord (Mpathic.ai); Md Shad Akhtar (IIIT Delhi); Tanmoy Chakraborty (Indraprastha Institute of Information Technology Delhi (IIIT-D),India)
ChemicalX: A Deep Learning Library for Drug Pair Scoring	Benedek A Rozemberczki (AstraZeneca)*; Charles T Hoyt (Harvard Medical School); Anna Gogleva (AstraZeneca); Piotr Grabowski (AstraZeneca); Klas Karis (Harvard Medical School); Andrej Lamov (AstraZeneca); Andriy Nikolov (AstraZeneca); Sebastian Nilsson (AstraZeneca); Michael Ughetto (AstraZeneca); Yu Wang (Vanderbilt university); Tyler Derr (Vanderbilt University); Bejamin Gyori (Harvard Medical School)

SESSION 5

Wednesday, August 17, 1:30 PM-3:30 PM, Room 1 (Question Answering & NLP Applications)

BE3R: BERT based Early-Exit using Expert Routing	Sourab Mangrulkar (Amazon Development Center India Pvt. Ltd.); Ankith M S (Amazon)*; Vivek Sembium (amazon)

Proactively Reducing the Hate Intensity of Online Posts via Hate Speech Normalization	Sarah Masud (IIIT Delhi, India)*; Manjot Bedi (Northeastern University); Mohammad Aflah Khan (IIIT Delhi); Md Shad Akhtar (IIIT Delhi); Tanmoy Chakraborty (Indraprastha Institute of Information Technology Delhi (IIIT-D),India)
Generating Examples From CLI Usage: Can Transformers Help?	Roshanak Zilouchian Moghaddam (Microsoft)*; Spandan Garg (Microsoft); Colin Clement (Microsoft); Yevhen Mohylevskyy (Microsoft); Neel Sundaresan (Microsoft)
Pretraining Representations of Multi-modal Multi-query E-commerce Search	xinyi liu (Xiamen University); Wanxian Guan (alibaba group); Lianyun Li (Xiamen University); Hui Li (Xiamen University); Chen Lin (Xiamen University)*; Xubin Li (Alibaba Group); Si Chen (alibaba); Jian Xu (Alibaba Group); Hongbo Deng (Alibaba Group); Bo Zheng (Alibaba Group)
Improving Relevance Modeling via Heterogeneous Behavior Graph Learning in Bing Ads	Bochen Pang (Microsoft); Chaozhuo Li (Microsoft Research Asia)*; Yuming Liu (Microsoft); Jianxun Lian (MSRA); Jianan Zhao (University of Notre Dame); Hao Sun (Microsoft); Weiwei Deng (Microsoft); Xing Xie (Microsoft Research Asia); Qi Zhang (Microsoft)

Wednesday, August 17, 1:30 PM-3:30 PM, Room 2 (Biomedical)

Fast Mining and Forecasting of Co-evolving Epidemiological Data Streams	Tasuku Kimura (Osaka University)*; Yasuko Matsubara (Osaka University); Koki Kawabata (Osaka University); Yasushi Sakurai (Osaka University)
T-Cell Receptor-Peptide Interaction Prediction with Physical Model Augmented Pseudo-Labeling	Yiren Jian (Dartmouth College); Erik J Kruus (NEC Labs); Martin Renqiang Min (NEC Labs America-Princeton)*
Predicting Age-Related Macular Degeneration Progression with Contrastive Attention and Time-Aware LSTM	Changchang Yin (The Ohio State University)*; Sayoko Moroi (Ohio State University); Ping Zhang (The Ohio State University)
SAMCNet: Towards a Spatially Explainable AI Approach for Classifying MxIF Oncology Data	Majid Farhadloo (University of Minnesota)*; Carl Molnar (University of Minnesota); Gaoxiang Luo (University of Minnesota); Yan Li (University of Minnesota); Shashi Shekhar (University of Minnesota); Rachel L Maus (Mayo Clinic); Svetomir Markovic (Mayo Clinic); Alexey Leontovich (Mayo Clinic); Raymond Moore (Mayo Clinic)

SESSION 6

Thursday, August 18, 10:00 AM-12:00 AM, Room 1 (Time-Series and Anomalies)

Data-Driven Oracle Bone Rejoining: A Dataset and Practical Self-Supervised Learning Scheme	Chongsheng Zhang (Henan University); Bin Wang (Henan University); Ke Chen (South China University of Technology)*; Ruixing Zong (Henan University); Bofeng Mo (Capital Normal University, China); Yi Men (Henan University); George Almpanidis (Henan University); Shanxiong Chen (southwest university); Xiangliang Zhang (University of Notre Dame)
Towards Learning Disentangled Representations for Time Series	Yuening Li (Texas A&M University)*; Zhengzhang Chen (NEC Laboratories America, Inc.); Daochen Zha (Rice University); Mengnan Du (Texas A&M University); Jingchao Ni (NEC Laboratories America); Denghui Zhang (Rutgers University); Haifeng Chen (NEC Labs); Xia Hu (Rice University)
Greykite: Deploying Flexible Forecasting at Scale in LinkedIn	Albert Chen (LinkedIn)*; Reza Hosseini (LinkedIn Inc); Kaixu Yang (LinkedIn); Sayan Patra (LinkedIn); Yi Su (LinkedIn); Saad Eddin Al Orjany (LinkedIn); Sishi Tang (Linkedin); Parvez Ahammad (LinkedIn)
Large-Scale Acoustic Automobile Fault Detection: Diagnosing Engines Through Sound	Dennis Fedorishin (University at Buffalo)*; Justas Birgiolas (ACV Auctions); Deen D Mohan (University at Buffalo); Livio Forte (ACV Auctions); Philip Schneider (ACV Auctions); Srirangaraj Setlur (University at Buffalo, SUNY); Venu Govindaraju (University at Buffalo, SUNY)
Rapid Regression Detection in Software Deployments through Sequential Testing	Michael S Lindon (Netflix)*; Chris Sanden (Netflix); Vache Shirikian (Netflix)

SESSION 7

Thursday, August 18, 1:30 PM-3:30 PM, Room 1 (Graph Learning)

EasyFGL: Towards a Unified, Comprehensive and Efficient Platform for Federated Graph Learning	Zhen Wang (Alibaba Group)*; Weirui Kuang (Alibaba Group); Yuexiang Xie (Alibaba Group); Liuyi Yao (Alibaba Group); Yaliang Li (Alibaba Group); Bolin Ding ("Data Analytics and Intelligence Lab, Alibaba Group"); Jingren Zhou (Alibaba Group)
Company-as-Tribe: Company Financial Risk Assessment On Tribe-Style Graph With Hierarchical Graph Neural Networks	Wendong Bi (Institute of Computing Technology, University of Chinese Academy of Sciences)*; Bingbing Xu (Institute of Computing Technology,University of Chinese Academy of Sciences); Xiaoqian Sun (Institute of Computing Technology, Chinese Academy of Sciences); Zidong Wang (Institute of Computing Technology, Chinese Academy of Sciences); Huawei Shen (Institute of Computing Technology, Chinese Academy of Sciences); Xueqi Cheng (Institute of Computing Technology, Chinese Academy of Sciences)
OAG-LM: Towards A Unified Backbone Language Model For Academic Knowledge Services	Xiao Liu (Tsinghua University)*; Da Yin (Tsinghua University); Jingnan Zheng (National University of Singapore); Xingjian Zhang (Tsinghua University); Peng Zhang (Tsinghua University); Hongxia Yang (Alibaba Group); Yuxiao Dong (Tsinghua University); Jie Tang (Tsinghua University)
GraphWorld: Fake Graphs Bring Real Insights for GNNs	John Palowitch (Google)*; Anton Tsitsulin (Google); Brandon Mayer (Google); Bryan Perozzi (Google Research)
CognitionNet: A Collaborative Neural Network for Play Style Discovery in Online Skill Gaming Platform	Rukma A Talwadker (Games24x7)*; Surajit Chakrabarty (Games24x7); Aditya Pareek (Games24x7); Tridib Mukherjee (Games24x7); Deepak Saini (Games24x7)

ADS PAPER SHOWCASE

Thursday, August 18, 10:00 AM-12:00 PM, Room 1 (Abnormal Detection, Adversarial Attacks & Robustness

Predicting Bearings' Degradation Stages for Predictive Maintenance in the Pharmaceutical Industry	Dovile Juodelyte (IT University of Copenhagen); Veronika Cheplygina (ITU); Therese Graversen (IT University of Copenhagen); Philippe Bonnet (IT Univ Copenhagen, Denmark)*
RCAD:Real-time Collaborative Anomaly Detection System for Mobile Broadband Networks	Azza H. Ahmed (SimulaMet)*; Michael Riegler (Simula); Steven Hicks (SimulaMet); Ahmed Elmokashfi (Simula Met)

AntiBenford Subgraphs: Unsupervised Anomaly Detection in Financial Networks	Tianyi Chen (Boston University); Charalampos Tsourakakis (Boston University and ISI Foundation)*
One Label on Result Can Reduce Thirty False Anomalies: Augmenting Log-based Anomaly Detection Models with Human Feedback	Tong Jia (Peking University)*; Yong Yang (Peking University); Ying Li (Peking University); Gang Huang (Peking University); Zhonghai Wu (Peking University)
CMMD: Cross-Metric Multi-Dimensional Root Cause Analysis	Shifu Yan (East China University of Science and Technology)*; Caihua Shan (microsoft); Wenyi YANG (Microsoft); Dongsheng Li (Microsoft Research Asia); Lili Qiu (The University of Texas at Austin); Bixiong Xu (Microsoft); Jie Tong (Microsoft); Qi Zhang (Microsoft)
Learning Sparse Latent Graph Representations for Anomaly Detection in Multivariate Time Series	Siho Han (Sungkyunkwan University)*; Simon S Woo (Sungkyunkwan University (SKKU))
User Behavior Pre-training for Online Fraud Detection	Can Liu (Alibaba Group)*; Yuncong Gao (Institute of Computing Technology, CAS); Li Sun (Alibaba Group); Jinghua Feng (Ailbaba Group); Hao Yang (Alibaba Group); Xiang Ao (Institute of Computing Technology, CAS)
CAT: Beyond Efficient Transformer for Content-Aware Anomaly Detection in Event Sequences	SHENGMING ZHANG (Rutgers University); Yanchi Liu (NEC Labs America)*; Xuchao Zhang (NEC Labs America); Wei Cheng (NEC Laboratories America); Haifeng Chen (NEC Labs); Hui Xiong (the State University of New Jersey)
BrainNet: Epileptic Wave Detection from SEEG with Hierarchical Graph Diffusion Learning	Junru Chen (Zhejiang University); Yang Yang (Zhejiang University)*; Tao Yu (Zhejiang University); Yingying Fan (Zhejiang University); Xiaolong Mo (Neuroechos Medical(Shenzhen) Co., Ltd); Carl Yang (Emory University)
Human-in-the-Loop Large-Scale Predictive Maintenance of Workstations	Alexander V Nikitin (Aalto University)*; Samuel Kaski (Aalto University and University of Manchester)

Thursday, August 18, 10:00 AM-12:00 PM, Room 2 (Conversation, QA and Other NLP Applications)

DocLayNet: A Large Human-annotated Dataset for Document Layout Segmentation	Birgit Pfitzmann (IBM Research); Christoph Auer (IBM Research); Michele Dolfi (IBM Research); Ahmed S Nassar (IBM Research); Peter W J Staar (IBM Research)*
COBART: Controlled, Optimized, Bidirectional and Auto-Regressive Transformer for Ad Headline Generation	Yashal S Kanungo (Amazon)*; Gyanendra Das (Amazon); Pooja A (Amazon); Sumit Negi (Amazon)
Semantic Aware Answer Sentence Selection using Self-Learning based Domain Adaptation	Rajdeep Sarkar (National University of Ireland Galway)*; Sourav Dutta (Huawei Research Centre); Haytham Assem (Huawei Research); Mihael Arcan (Insight Centre for Data Analytics); John McCrae (National University of Ireland Galway)
Preventing Catastrophic Forgetting in Natural Language Tasks	Sudipta Kar (Amazon)*; Giuseppe Castellucci (Amazon); Simone Filice (Amazon); Shervin Malmasi (Amazon); Oleg Rokhlenko (Amazon)
ILASR: Privacy-Preserving Incremental Learning for Automatic Speech Recognition at Production Scale	Gopinath Chennupati (Amazon Alexa); Milind Rao (Amazon Alexa); Gurpreet Chadha (Amazon Alexa); Aaron Eakin (Amazon Alexa); Anirudh Raju (Amazon Alexa); Gautam Tiwari (Amazon Alexa); Anit Kumar Sahu (Amazon Alexa AI)*; Ariya Rastrow (Amazon Alexa); Jasha Droppo (Amazon Alexa); Andy Oberlin (Amazon Alexa); Buddha Nandanoor (Amazon Alexa); Prahalad Venkataramanan (Amazon Alexa); Zheng Wu (Amazon Alexa); Pankaj Sitpure (Amazon Alexa)
Ask to know more: Counterfactual Explanations for Fake Claims	Shih-Chieh Dai (University of Texas at Austin)*; Yi-Li Hsu (Academia Sinica; National Tsing Hua University); Aiping Xiong (The Pennsylvania State University); Lun-Wei Ku (Academia Sinica)
GradMask: Gradient-Guided Token Masking for Textual Adversarial Example Detection	Han Cheol Moon (Nanyang Technological University)*; Shafiq Joty (Nanyang Technological University); Xu Chi (Singapore Institute of Manufacturing Technology, A-Star)
Duplex Conversation: Enable Human-like Interaction in Spoken Dialogue System	Ting-En Lin (Alibaba Group)*; Yuchuan Wu (Alibaba); Fei Huang (Alibaba); Luo Si (); Jian Sun (Alibaba DAMO Academy); Yongbin Li (Alibaba Group)
Personalized Chit-Chat Generation for Recommendation Using External Chat Corpora	Changyu Chen (Renmin University of China); Xiting Wang (Microsoft Research Asia)*; Xiaoyuan Yi (Microsoft Research Asia); Fangzhao Wu (MSRA); Xing Xie (Microsoft Research Asia); Rui Yan (Peking University)

Thursday, August 18, 10:00 AM-12:00 PM, Room 3 (Graph Learning & Social Network)

Graph Neural Network Training and Data Tiering	Seung Won Min (University of Illinois at Urbana-Champaign)*; Kun Wu (University of Illinois at Urbana-Champaign); Mert Hidayetoglu (University of Illinois at Urbana-Champaign); Jinjun Xiong (University at Buffalo); Xiang Song (Amazon); Wen-mei Hwu (NVIDIA Corporation)
Learning Large-scale Subsurface Simulations with a Hybrid Graph Network Simulator	Tailin Wu (Stanford)*; Qinchen Wang (Stanford); Yinan Zhang (Stanford University); Rex Ying (Stanford University); Kaidi Cao (Stanford University); Rok Sosic (Stanford University); Ridwan Jalali (Saudi Aramco); Hassan Hamam (Saudi Aramco); Marko Maucec (Saudi Aramco); Jure Leskovec (Stanford University)
CS-RAD: Conditional Member Status Refinement and Ability Discovery for Social Network Applications	Yiming Ma (LinkedIn)*
Embedding Compression with Hashing for Efficient Representation Learning in Large-Scale Graph	Michael Yeh (Visa Research)*; Mengting Gu (Visa Research); Yan Zheng (Visa Research); Huiyuan Chen (Visa Research); Javid Ebrahimi (Visa Research); Zhongfang Zhuang (Visa Research); Junpeng Wang (Visa Research); Liang Wang (Visa Research); Wei Zhang (Visa Research)
TAG: Toward Accurate Social Media Content Tagging with a Concept Graph	Jiuding Yang (University of Alberta)*; Weidong Guo (Tencent); Bang Liu (University of Montreal); Yakun Yu (University of Alberta); Chaoyue Wang (Tencent); Jinwen Luo (Tencent); Linglong Kong (University of Alberta); Di Niu (University of Alberta); Zhen Wen (Tencent Technology (Shenzhen) Co., Ltd)
TwHIN: Embedding the Twitter Heterogeneous Information Network for Personalized Recommendation	Ahmed El-Kishky (Twitter)*; Thomas Markovich (Twitter); Serim Park (Twitter); Chetan Verma (Twitter); Baekjin Kim (Twitter); Ramy Eskander (Twitter); Yury Malkov (Twitter); Frank Portman (Twitter); Sofia Samaniego (Twitter); Ying Xiao (Twitter); Aria Haghighi (Twitter)
DP-GAT: A Framework for Image-based Disease Progression Prediction	Alex Foo (National University of Singapore)*; Wynne Hsu (National University of Singapore); Mong Li Lee (National University of Singapore); Gavin S Tan (Singapore eye research institute)

Distributed Hybrid CPU and GPU training for Graph Neural Networks on Billion-Scale Heterogeneous Graphs	Da Zheng (Amazon)*; Xiang Song (Amazon); Chengru Yang (Amazon); Dominique LaSalle (NVIDIA Corporation); George Karypis (Amazon)
Generalizable floorplanner through Corner Block List representation and Hypergraph embedding	Mohammad Amini (Huawei Noah's Ark Lab)*; Zhanguang Zhang (Huawei); Surya Penmetsa (Huawei Noah's Ark Lab); Yingxue Zhang (Huawei Technologies Canada); Jianye Hao (Huawei Noah's Ark Lab); Wulong Liu (Huawei Noah's Ark Lab)
Multi-objective Optimization of Notifications Using Offline Reinforcement Learning	Prakruthi Prabhakar (LinkedIn Corporation); Yiping Yuan (LinkedIn)*; Guangyu Yang (LinkedIn Corporation); Wensheng Sun (LinkedIn Corporation); Ajith Muralidharan (LINKEDIN CORPORATION)
Graph Neural Networks for Multimodal Single-Cell Data Integration	Hongzhi Wen (Michigan State University); Jiayuan Ding (Michigan State University); Wei Jin (Michigan State University)*; Yuying Xie (Michigan State University); Jiliang Tang (Michigan State University)

Thursday, August 18, 10:00 AM-12:00 PM, Room 4 (Health, Business, Geo and Other Real-World

What is the Most Effective Intervention to Increase Job Retention for this Disabled Worker?	Ha Xuan Tran (University of South Australia)*; Thuc Duy Le (University of South Australia); Jiuyong Li (University of South Australia); Lin Liu (University of South Australia); Jixue Liu (University of South Australia); Yanchang Zhao (CSIRO); Tony Waters (Maxima Training Group (Aust) Ltd.)
HiPAL: A Deep Framework for Physician Burnout Prediction Using Activity Logs in Electronic Health Records	Hanyang Liu (Washington University in St Louis)*; Sunny S. Lou (Washington University In St Louis); Benjamin C. Warner (Washington University In St Louis); Derek R. Harford (Washington University In St Louis); Thomas Kannampallil (Washington University in St. Louis); Chenyang Lu (Washington University in St. Louis)
Solar: Science of Entity Loss Attribution	Anshuman Mourya (Amazon)*; Prateek Sircar (Amazon); Anirban Majumder (Amazon); Deepak Gupta (Amazon)
A Process-Aware Decision Support System for Business Processes	Prerna Agarwal (IBM Research)*; Buyu Gao (IBM Research - China); Siyu Huo (IBM Research); Prabhat Reddy (IBM Research); Sampath Dechu (IBM Research); Yazan Obeidi (IBM); Vinod Muthusamy (IBM Research); Vatche Isahagian (IBM Research); Sebastian Carbajales (IBM)
4SDrug: Symptom-based Set-to-set Small and Safe Drug Recommendation	Yanchao Tan (Zhejiang University)*; Chengjun Kong (National University of Singapore); Leisheng Yu (Emory University); Pan Li (Purdue University); Chaochao Chen (Zhejiang University); Xiaolin Zheng (Zhejiang University); Vicki Hertzberg (Emory University); Carl Yang (Emory University)
Multi-task Envisioning Transformer-based Autoencoder for Corporate Credit Rating Migration Early Prediction	Han Yue (Brandeis University)*; Steve Xia (Guardian Life Insurance); Hongfu Liu (Brandeis University)
Counterfactual Phenotyping with Censored Time-to-Events	Chirag Nagpal (Carnegie Mellon University)*; Mononito Goswami (Carnegie Mellon University); Keith A Dufendach (University of Pittsburgh Medical Center); Artur Dubrawski (CMU)
Characterizing Covid waves via spatio-temporal decomposition	Kevin Quinn (Boston University); Evimaria Terzi (Boston University)*; Mark Crovella (Boston University)
Towards reliable detection of dielectric hotspots in thermal images of the underground distribution network	François Miralles (Hydro-Québec)*; Luc Cauchon (Hydro-Québec); Marc-Andre Magnan (Hydro-Québec); François Grégoire (Hydro-Québec); Mouhamadou Makhtar Dione (Hydro-Québec); Arnaud Zinflou (Hydro-Québec)
SoccerCPD: Formation and Role Change-Point Detection in Soccer Matches Using Spatiotemporal Tracking Data	Hyunsung Kim (Fitogether Inc.)*; Bit Kim (Fitogether Inc.); Dongwook Chung (Fitogether Inc.); Jinsung Yoon (Fitogether Inc.); Sang-Ki Ko (Kangwon National University)
Vexation-Aware Active Learning for On-Menu Restaurant Dish Availability	Jean-François Kagy (Google); Flip Korn (Google, USA)*; Afshin Rostamizadeh (Google Research); Chris Welty (Google)
A/B Testing Intuition Busters: Common Misunderstandings in Online Controlled Experiments	Ronny Kohavi (Kohavi)*; Alex Deng (Airbnb); Lukas Vermeer (Vista)

ADS PAPER SHOWCASE

Thursday, August 18, 1:30 pM-3:30 PM, Room 1 (Multi-Modal and Multilingual knowledge & Data Mining)

The Good, the Bad, and the Outliers: A Testing Framework for Decision Optimization Model Learning	Orit Davidovich (IBM)*; Gheorghe-Teodor Bercea (IBM Research); Segev Wasserkrug (IBM Research)
Design Domain Specific Neural Network via Symbolic Testing	Hui Li (Ant Financial); Xing Fu (Ant Group)*; Ruofan Wu (Ant Group); Jinyu Xu (Ant group); Kai Xiao (Ant Group); Weiqiang Wang (Ant Group); SHUAI CHEN (Ant Financial); Leilei Shi (Ant Group); Tao Xiong (Ant Group); Yuan Qi (Ant Financial Services Group)
Seq2Event: Learning the Language of Soccer using Transformer-based Match Event Prediction	Ian Simpson (University of Southampton)*; Ryan J Beal (University of Southampton); Duncan Locke (Rugby Football Union); Timothy J Norman (University of Southampton)
A Fully Differentiable Set Autoencoder	Nikita Janakarajan (ETH Zürich)*; Jannis Born (IBM Research); Matteo Manica (IBM Research)
Temporal Multimodal Multivariate Learning	Hyoshin Park (North Carolina A&T State University)*; Justice Darko (North Carolina A&T State University); Niharika Deshpande (North Carolina A&T State University); Venktesh Pandey (North Carolina A&T State University); Hui Su (Jet Propulsion Laboratory); Masahiro Ono (JPL); Dedrick Barkley (North Carolina A&T State University); Larkin Folsom (North Carolina A&T State University); Derek Posselt (Jet Propulsion Laboratory); Steve Chien (Jet Propulsion Laboratory, California Institute of Technology)
Para-Pred: Addressing Heterogeneity for City-Wide Indoor Status Estimation in On-Demand Delivery	Wei Liu (Southeast University)*; Yi Ding (UNIVERSITY OF MINNESOTA); Shuai Wang (Southeast University); Yu Yang (Lehigh University); Desheng Zhang (Rutgers University)

Alexa Teacher Model: Pretraining and Distilling Multi-Billion-Parameter Encoders for Natural Language Understanding Systems	Jack FitzGerald (Amazon Alexa Artificial Intelligence)*; Shankar Ananthakrishnan (Amazon); Konstantine Arkoudas (Amazon); Davide Bernardi (Amazon); Abhishek Bhagia (Amazon); Claudio Delli Bovi (Amazon); Jin Cao (Amazon Inc); Rakesh Chada (Amazon); Amit Chauhan (Amazon); Luoxin Chen (Amazon); Anurag Dwarakanath (Amazon); Satyam Dwivedi (Amazon); Turan Gojayev (Amazon); Karthik Gopalakrishnan (Amazon Alexa AI); Thomas Gueudre (Amazon); Dilek Z Hakkani-Tur (Amazon Alexa AI); Wael Hamza (Amazon); Jonathan J Hüser (Amazon Alexa); Kevin Jose (Amazon); Haidar Khan (Amazon); Beiye Liu (Amazon); Jianhua Lu (Amazon Alexa AI); Alessandro Manzotti (Amazon); Pradeep Natarajan (Amazon.com Inc.); Karolina Owczarzak (Amazon); Gokmen Oz (Amazon); Enrico Palumbo (Amazon); Charith Peris (Amazon); Chandana Prakash (Amazon); Stephen Rawls (Amazon); Andy Rosenbaum (Amazon); Anjali Shenoy (Amazon); Saleh Soltan (Amazon); Mukund Sridhar (Amazon); Lizhen Tan (Amazon); Fabian Triefenbach (Amazon); Pan Wei (Amazon); Haiyang Yu (Amazon); Shuai Zheng (Amazon Web Services); Gokhan Tur (Amazon Alexa AI); Prem Natarajan (Amazon.com Inc.)
TaxoTrans: Taxonomy-Guided Entity Translation	Xiao Yan (LinkedIn); Jaewon Yang (LINKEDIN CORPORATION); Zhuliu Li (LinkedIn)*; Weizhi Meng (Linkedin); Yanen Li (LINKEDIN CORPORATION); Yiming Wang (Google)
Perioperative Predictions with Interpretable Latent Representation	Bing Xue (Washington University in St. Louis)*; York Jiao (Washington University in Saint Louis); Thomas Kannampallil (Washington University in St. Louis); Bradley A Fritz (Washington University in St. Louis); Christopher King (Washington University in St. Louis); Joanna Abraham (Washington University in St. Louis); Michael Avidan (Washington University in St. Louis); Chenyang Lu (Washington University in St. Louis)
Precise Mobility Intervention for Epidemic Control Using Unobservable Information via Deep Reinforcement Learning	Tao Feng (Tsinghua University)*; Tong Xia (University of Cambridge); Xiaochen Fan (Tsinghua University); Huandong Wang (Tsinghua University); Zefang Zong (Tsinghua University); Yong Li (Tsinghua University)

Thursday, August 18, 1:30 pM-3:30 PM, Room 2 (Recommendation & Contextualization)

An Online Multi-task Learning Framework for Google Feed Ads Auction Models	Ning Ma (Google)*; Mustafa Ispir (Google); Yuan Li (Google); Yongpeng Yang (Google); Zhe Chen (Google); Zhiyuan Cheng (Google); Lan Nie (Google); Kishor Barman (Google)
Surrogate for Long-Term User Experience in Recommender Systems	Yuyan Wang (Google Brain)*; Mohit Sharma (University of Minnesota); Sriraj Badam (Google); Can Xu (Google); Qian Sun (Google); Lee Richardson (Google); Lisa Chung (Google); Ed H. Chi (Google); Minmin Chen (Google)
Reinforcement Learning in the Wild: Scalable RL Dispatching Algorithm Deployed in Ridehailing Marketplace	Soheil Sadeghi Eshkevari (DiDi Labs)*; Xiaocheng Tang (DiDi AI Labs); Zhiwei Qin (DiDi AI Labs); Jinhan Mei (DiDi Global); Cheng Zhang (Didi Chuxing); Qianying Meng (DiDi Global); Jia Xu (DiDi Global)
Generalized Deep Mixed Models	Jun Shi (LinkedIn)*; Chengming Jiang (LinkedIn Corporation); Aman Gupta (LinkedIn); Mingzhou Zhou (LinkedIn Corporation); Yunbo Ouyang (LinkedIn Corporation); Charles Xiao (LinkedIn); Qingquan Song (LinkedIn); Alice Wu (LinkedIn Corporation); Haichao Wei (LinkedIn Corporation); Huiji Gao (LinkedIn)
Automatically Discovering User Consumption Intents in Meituan	Yinfeng Li (Tsinghua University)*; Chen Gao (Tsinghua University); Xiaoyi Du (Meituan); HUAZHOU WEI (Meituan); Hengliang Luo (Meituan); Depeng Jin (Tsinghua University); Yong Li (Tsinghua University)
Automatic Generation of Product-Image Sequence in E-commerce	Xiaochuan Fan (JD.com)*; Chi Zhang (JD.com); Yong Yang (JD); Yue Shang (JD.com); xueying zhang (jd.com silicon valley research center); Zhen He (JD); Xiao Yun (JD.com); Bo Long (JD.com); Lingfei Wu (JD.COM Silicon Valley Research Center)
PinnerFormer: Sequence Modeling for User Representation at Pinterest	Nikil Pancha (Pinterest, Inc.)*; Andrew H Zhai (Pinterest, Inc.); Jure Leskovec (Stanford University); Charles Rosenberg (Pinterest)
ItemSage: Learning Product Embeddings for Shopping Recommendations at Pinterest	Paul D Baltescu (Pinterest)*; Paul Baltescu (Pinterest); Haoyu Chen (Pinterest); Nikil Pancha (Pinterest, Inc.); Andrew H Zhai (Pinterest, Inc.); Jure Leskovec (Stanford University); Charles Rosenberg (Pinterest)
ASPIRE: Air Shipping Recommendation for E-commerce Products via Causal Inference Framework	Abhirup Mondal (Amazon)*; Anirban Majumder (Amazon); Vineet Chaoji (Amazon)
Recommendation in offline stores: A gamification approach for learning the spatiotemporal representation of indoor shopping	JongKyung Shin (Ulsan National Institute of Science and Technology); Changhun Lee (UNIST); Chiehyeon Lim (Ulsan National Institute of Science and Technology)*; Yunmo Shin (Retailtech co., Ltd.); Junseok Lim (Retailtech co., Ltd.)
ROI-Constrained Bidding via Curriculum-Guided Bayesian Reinforcement Learning	Haozhe Wang (ShanghaiTech University)*; Chao Du (Alibaba Group); Panyan Fang (Alibaba Group); Shuo Yuan (Alibaba Group); Xuming He (ShanghaiTech University); Liang Wang (Alibaba group); Bo Zheng (Alibaba Group)
NxtPost: User to Post Recommendations in Facebook Groups	Fedor Borisyuk (Facebook)*; Kaushik Rangadurai (Facebook); Yiqun Liu (Facebook); Siddarth Malreddy (Facebook); Xiaoyi Liu (Facebook)

Thursday, August 18, 1:30 pM-3:30 PM, Room 3 (Scalable, Distributed Systems & Trustable AI)

Collborative Intelligence Orchestration: Inconsistency-Based Fusion of Semi-Supervised Learning and Active Learning	Jiannan Guo (Zhejiang University)*; Yangyang Kang (Alibaba Group); Yu Duan (Alibaba Group); Xiaozhong Liu (Indiana University Bloomington); Siliang Tang (Zhejiang University); Wenqiao Zhang (Zhejiang University); Kun Kuang (Zhejiang University); Changlong Sun (Alibaba Group); Fei Wu (Zhejiang University, China)
AutoShard: Automated Embedding Table Sharding for Recommender Systems	Daochen Zha (Rice University)*; Louis Feng (Meta); Bhargav Bhushanam (Facebook); Dhruv Choudhary (Facebook Inc.); Jade Nie (Meta); Yuandong Tian (Facebook); Jay Chae (Meta); Yinbin Ma (Meta Platforms, Inc.); Arun Kejariwal (Facebook Inc.); Xia Hu (Rice University)
Profiling Deep Learning Workloads at Scale using Amazon SageMaker	Nathalie Rauschmayr (Amazon)*; Sami Kama (Amazon); Muhyun Kim (AWS); Miyoung Choi (Amazon); Krishnaram Kenthapadi (Fiddler AI)
Fed-LTD: Towards Cross-Platform Ride Hailing via Federated Learning to Dispatch	Yansheng Wang (Beihang University); Yongxin Tong (Beihang University)*; Zimu Zhou (Singapore Management University); Ziyao Ren (Beihang University); Yi Xu (Beihang University); Guobin Wu (Didichuxing Inc.); Weifeng Lv (Beihang University)
Optimizing Long-Term Efficiency and Fairness in Ride-Hailing via Joint Order Dispatching and Driver Repositioning	Jiahui Sun (Shanghai Jiao Tong University); Haiming Jin (Shanghai Jiao Tong University)*; Zhaoxing Yang (Shanghai Jiao Tong University); Lu Su (Purdue University); Xinbing Wang (Shanghai Jiao Tong University)

A Meta Reinforcement Learning Approach for Predictive Autoscaling In the Cloud	Siqiao Xue (Ant Group)*; Chao Qu (Ant Financial Services Group); Xiaoming Shi (Ant Group); Cong Liao (Ant Group); Shiyi Zhu (Ant Group); Xiaoyu Tan (Ant Group); Lin-Tao Ma (Ant Group); Shiyu Wang (antgroup); Shijun Wang (Ant Group); hu yun (ant group); Lei Lei (Ant Group); YangFei Zheng (antgroup); Jianguo Li (Ant Group); James Y Zhang (Ant Group)
Sparx: Distributed Outlier Detection at Scale	Sean Zhang (Carnegie Mellon University)*; Varun Ursekar (Carnegie Mellon University); Leman Akoglu (CMU)
Task-optimized User Clustering based on Mobile App Usage for Cold-start Recommendations	Bulou Liu (Tsinghua University)*; Bing Bai (Tencent); Weibang Xie (Tencent); Yiwen Guo (Independent Researcher); Hao Chen (UC Davis)
Real-Time Rideshare Driver Supply Values using Online Reinforcement Learning	Benjamin Han (Lyft)*; Hyungjun Lee (Snapchat); Sebastien Martin (Kellogg School of Management)
Amazon SageMaker Model Monitor: A System for Real-Time Insights into Deployed Machine Learning Models	David Nigenda (Amazon Web Services)*; Zohar Karnin (Amazon); Muhammad Bilal Zafar (Amazon Web Services); Raghu Ramesha (Amazon Web Services); Alan Tan (Amazon Web Services); Michele Donini (Amazon); Krishnaram Kenthapadi (Fiddler AI)
Interpretable Personalized Experimentation	Han Wu (Stanford University); Sarah Tan (Facebook)*; WEIWEI LI (Meta); Mia R Garrard (Facebook); Adam Obeng (Meta); Drew Dimmery (Facebook); Shaun Singh (Facebook); Hanson Wang (Facebook); Daniel Jiang (Facebook); Eytan Bakshy (Meta)
CERAM: Coverage Expansion for Recommendations by Associating Discarded Models	Yoshiki Matsune (Ritsumeikan University)*; Kota Tsubouchi (Yahoo Japan Corporation); Nobuhiko Nishio (Ritsumeikan University)

Thursday, August 18, 1:30 pM-3:30 PM, Room 4 (Search & Information Retrieval)

Learning Supplementary NLP features for CTR Prediction in Sponsored Search	Dong Wang (Microsoft)*; Shaoguang Yan (Microsoft); Yunqing Xia (Microsoft); Kave Salamatian (University of Savoie); Weiwei Deng (Microsoft); Qi Zhang (Microsoft)
Type Linking for Query Understanding and Semantic Search	Georgios Stoilos (Huawei Technologies UK)*; Nikos Papasarantopoulos (Huawei Technologies); Pavlos Vougiouklis (Huawei Technologies); Patrik Bansky (Huawei Technologies)
Amazon StyleSnap: A Visual Search System for Fashion and Home	Ming Du (Amazon)*; Arnau Ramisa (Amazon); Amit Kumar K C (Amazon); Sampath Chanda (Amazon); Mengjiao Wang (Amazon); Neelakandan Rajesh (Amazon); Shasha Li (Amazon); Yingchuan Hu (Amazon); Tao Zhou (Amazon Inc.); Nagashri Lakshminarayana (Amazon); Son Tran (Amazon A9); Douglas R Gray (Amazon)
Scale Calibration of Deep Ranking Models	Le Yan (Google)*; Zhen Qin (Google); Xuanhui Wang (Google); Michael Bendersky (Google); Marc Najork (Google)
Dynamic Graph Segmentation For Deep Graph Neural Networks	Johan Zhi Kang Kok (Grab)*; Suwei Yang (National University of Singapore); Suriya Venkatesan (Grab); Sienyi Tan (Grab); Feng Cheng (Grab); Bingsheng He (National University of Singapore)
CommerceMM: Large-Scale Commerce MultiModal Representation Learning with Omni Retrieval	Licheng Yu (Facebook)*; Jun Chen (Facebook); Animesh Sinha (Facebook AI); Mengjiao Wang (Facebook); Hugo Chen (Facebook); Tamara Berg (Facebook AI Research); Ning Zhang (Facebook)
Structure-Aware Multilingual Language Model: Leveraging Graph Structures for Search Relevance in E-commerce	Nurendra Choudhary (Virginia Tech)*; Nikhil Rao (Amazon); Karthik Subbian (Amazon); Chandan K Reddy (Virginia Tech)
Semantic Retrieval at Walmart	Alessandro Magnani ()*; Feng Liu (Walmart); Suthee chaidaroon (walmart); Praveen Reddy Suram (Walmart); Sachin Yadav (Walmart); Ajit Puthenputhussery (Walmart Global Tech); Tony Lee (Walmart); Sijie Chen (Walmart); Ciya Liao (Walmart Global Technology); Min Xie (Instacart); Anirudh Kashi (Usc)
Septor: Seismic Depth Estimation using Hierarchical Neural Network	Mohammad Ashraf Siddiquee (University of New Mexico)*; Vinicius Souza (Pontificia Universidade Catolica do Parana (PUCR)); Abdullah Mueen (University of New Mexico)
Learning Backward Compatible Embeddings	Weihua Hu (Stanford University)*; Rajas Bansal (Stanford University); Kaidi Cao (Stanford University); Nikhil Rao (Amazon); Karthik Subbian (Amazon); Jure Leskovec (Stanford University)
Adaptive Multi-view Rule Discovery for Weakly-Supervised Compatible Products Prediction	Rongzhi Zhang (Georgia Institution of Technology)*; Rebecca West (The Home Depot); Xiquan Cui (Homedepot); Chao Zhang (Georgia Institute of Technology)

All Other Accepted Papers

Generative Adversarial Networks Enhanced Pre-training for Insufficient Electronic Health Records Modeling	Houxing Ren (Beihang University); Jingyuan Wang (Beihang University)*; Wayne Xin Zhao (Renmin University of China)
POLARIS: A Geographic Pre-trained Model and its Applications in Baidu Maps	Jizhou Huang (Baidu)*; Haifeng Wang (Baidu); Yibo Sun (Baidu); yunsheng shi (baidu); Zhengjie Huang (Baidu); An Zhuo (Baidu); Shikun Feng (Baidu)
G2NET: A General Geography-Aware Representation Network for Hotel Search Ranking	Jia Xu (Guangxi University)*; Fei Xiong (Alibaba Group); Zulong Chen (Alibaba); Mingyuan Tao (Alibaba Group); Liangyue Li (Alibaba Group); Quan Lu (Alibaba Group)
Service Time Prediction for Delivery Tasks via Spatial Meta-Learning	Sijie Ruan (Xidian University)*; Cheng Long (Nanyang Technological University); Zhipeng Ma (Southwest Jiaotong University); Jie Bao (JD Finance); Tianfu He (Harbin Institute of Technology); Ruiyuan Li (Chongqing University); Yiheng Chen (JD Logistics); Shengnan Wu (JD Logistics); Yu Zheng (JD)
Precision CityShield Against Hazardous Chemicals Threats via Location Mining and Self-supervised Learning	Jiahao Ji (Beihang University)*; Jingyuan Wang (Beihang University); Junjie Wu (Beihang University); Boyang Han (JD Intelligent Cities Research); Junbo Zhang (JD Intelligent Cities Research); Yu Zheng (JD)
DuIVA: An Intelligent Voice Assistant for Hands-free and Eyes-free Voice Interaction with Baidu Maps App	Jizhou Huang (Baidu)*; Haifeng Wang (Baidu); Shiqiang Ding (BAIDU); Shaolei Wang (Baidu)

Applying Deep Learning Based Probabilistic Forecasting to Food Preparation Time for On-Demand Delivery Service	Chengliang Gao (Meituan)*; Fan Zhang (Meituan); Yue Zhou (Meituan); Ronggen Feng (Meituan); Qiang Ru (Meituan); Kaigui Bian (Peking University); Renqing He (Meituan-Dianping Group); Zhizhao Sun (Meituan-Dianping Group)
RBG: Hierarchically Solving Large-Scale Routing Problems in Logistic Systems via Reinforcement Learning	Zefang Zong (Tsinghua University)*; Hansen Wang (Tsinghua University); wang jingwei (Tsinghua); Meng Zheng (Hitachi); Yong Li (Tsinghua University)
Felicitas: Federated Learning in Distributed Cross Device Collaborative Frameworks	QI ZHANG (USTC); tiancheng wu (huawei)*; Zhou Peichen (Huawei Technologies Co., Ltd.); shan zhou (Huawei Technologies Co. Ltd); xiulang jin (huawei); Yuan Yang (Huawei)
Multi-Task Fusion via Reinforcement Learning for Long-Term User Satisfaction in Recommender Systems	Qihua Zhang (Tencent); Junning Liu (Tencent Inc.); Yuzhuo Dai (Tencent); Kunlun Zheng (Tencent); Fan Huang (Tencent)*; Yifan Yuan (Tencent); Xianfeng Tan (Tencent); Yiyan Qi (Tencent)
Causal Inference-Based Root Cause Analysis for Online Service Systems with Intervention Recognition	Mingjie Li (Tsinghua University)*; Zeyan Li (Tsinghua University); Kanglin Yin (BizSeer); Xiaohui Nie (BizSeer); Wenchi Zhang (BizSeer); Kaixin Sui (Bizseer Technology); Dan Pei (Tsinghua University)
Three-Stage Root Cause Analysis for Logistics Time Efficiency via Explainable Machine Learning	Shiqi Hao (JD Logistics); Yang Liu (JD Logistics)*; Yu Wang (JD Logistics); Yuan Wang (JD Logistics); Wenming Zhe (JD Logistics)
CONFLUX: A Request-level Fusion Framework for Impression Allocation via Cascade Distillation	XiaoYu Wang (University of Science and Technology of China); bin tan (tencent); Guo Yonghui (tencent); Tao Yang (Tencent); Dongbo Huang (Tencent); Lan Xu (Tencent); Nikolaos Freris (University of Science and Technology of China); Hao Zhou (University of Science and Technology of China); Xiangyang Li (University of Science and Technology of China)*
Arbitrary Distribution Modeling with Censorship in Real-Time Bidding Advertising	Xu Li (FreeWheel)*; Michelle Zhang (Northwestern University)
Interpreting Trajectories from Multiple Views: A Hierarchical Self-Attention Network for Estimating the Time of Arrival	Zebin Chen (South China University of Technology); Xiaolin Xiao (South China University of Technology)*; Yuejiao Gong (South China University of Technology); Jun Fang (Didi Chuxing); Nan Ma (Didi Chuxing); Hua Chai (Didi Chuxing); Zhiguang Cao (Singapore Institute of Manufacturing Technology)
Retrieval-Based Gradient Boosting Decision Trees for Disease Risk Assessment	Handong Ma (Shanghai Jiaotong University); Jiahang Cao (Shanghai Jiao Tong University)*; Yuchen Fang (Shanghai Jiao Tong University); Weinan Zhang (Shanghai Jiao Tong University); Yong Yu (Shanghai Jiao Tong University); Wenbo Sheng (Shanghai Synyi Medical Technology Co. Ltd); Shaodian Zhang (Shanghai Synyi Medical Technology Co. Ltd)
EXTR: Click-Through Rate Prediction with Externalities in E-Commerce Sponsored Search	Chi Chen (Alibaba)*; Hui Chen (Tsinghua University); Kangzhi Zhao (Alibaba Group); Junsheng Zhou (Alibaba Group); Li He (Alibaba Group); Hongbo Deng (Alibaba Group); Jian Xu (Alibaba Group); Bo Zheng (Alibaba Group); Yong Zhang (" Tsinghua University, China"); Chunxiao Xing (Tsinghua University)
Lion: A GPU-Accelerated Online Serving System for Web-Scale Recommendation at Baidu	Hao Liu (HKUST)*; Qian Gao (Baidu, Inc); Xiaochao Liao (Baidu Inc.); Guangxing Chen (Baidu, Inc.); Hao Xiong (Baidu, Inc.); Silin Ren (Baidu Inc.); Guobao Yang (Baidu, Inc.); Zhiwei Zha (Baidu, Inc.)
EGM: Enhanced Graph-based Model for Large-scale Video Advertisement Search	Tan Yu (Baidu Research)*; Jie Liu (BaiDu); yi yang (Baidu); YI LI (Baidu); Hongliang Fei (Baidu Research); Ping Li (Baidu Research)
Mixture of Virtual-Kernel Experts for Multi-Objective User Profile Modeling	Zhenhui Xu (Tencent Inc.)*; Meng Zhao (Tencent Inc.); Liqun Liu (Tencent Inc.); Lei Xiao (Tencent); Xiaopeng Zhang (Tencent); Bifeng Zhang (Tencent Inc.)
A Stochastic Shortest Path Algorithm for Optimizing Spaced Repetition Scheduling	Junyao Ye (Harbin Institute of Technology, Shenzhen); Jingyong Su (Harbin Institute of Technology, Shenzhen)*; Yilong Cao (Maimemo, Inc.)
A Logic Aware Neural Generation Method for Explainable Data-to-text	Xiexiong Lin (ant-fintech)*; Huaisong Li (Ant Group); Tao Huang (Antgroup); Feng Wang (ant-fintech); Taifeng Wang (Ant Group); Tianyi Zhang (Alipay (Hangzhou) Information & Technology Co., Ltd); Fuzhen Zhuang (Institute of Artificial Intelligence, Beihang University); Linlin Chao (Ant Financial Services Group)
AutoFAS: Automatic Feature and Architecture Selection for Pre-Ranking System	Xiang Li (Meituan)*; Xiaojiang Zhou (Meituan); Yao Xiao (Meituan); Peihao Huang (Meituan); Dayao Chen (Meituan); Sheng Chen (Meituan); Yunsen Xian (Meituan)
Graph2Route: A Dynamic Spatial-Temporal Graph Neural Network for Pick-up and Delivery Route Prediction	Haomin Wen (Beijing Jiaotong University)*; Youfang Lin (Beijing Jiaotong University); Xiaowei Mao (Beijing Jiaotong University); Fan Wu (Cainiao Network); Yiji Zhao (Beijing JiaoTong University); Haochen Wang (BeijingJiaotong University); Jianbin Zheng (Cainiao Network); lixia wu (Cainiao Ltd.); Haoyuan Hu (Cainiao Network); Huaiyu Wan (Beijing Jiaotong University)
Packet Representation Learning for Traffic Classification	Xuying Meng (Chinese Academy of Sciences)*; Yequan Wang (ICT, CAS); Runxin Ma (Chinese Academy of Sciences); Haitong Luo (Chinese Academy of Sciences); Xiang Li (Alibaba Group); Yujun Zhang (Chinese Academy of Sciences)
No One Left Behind: Inclusive Federated Learning over Heterogeneous Devices	Ruixuan Liu (Renmin University of China)*; Fangzhao Wu (MSRA); Chuhan Wu (Tsinghua University); Yanlin Wang (Microsoft Research Asia); Lingjuan Lyu (Sony AI); Hong Chen (" Renmin University, China"); Xing Xie (Microsoft Research Asia)
ReprBERT: Distilling BERT to an Efficient Representation-Based Relevance Model for E-Commerce	Shaowei Yao (Alibaba Group)*; Jiwei Tan (Alibaba Group); Xi Chen (Alibaba Group); Juhao Zhang (Alibaba); Xiaoyi Zeng (Alibaba Group); Keping Yang (Alibaba)
Self-Supervised Augmentation and Generation for Multi-lingual Text Advertisements at Bing	Xiaoyu Kou (Microsoft)*; Tianqi Zhao (Microsoft); Fan Zhang (Microsoft); Song Li (Microsoft); Qi Zhang (Microsoft)
Analyzing Online Transaction Networks with Network Motifs	Jiawei Jiang (Wuhan University)*; Yusong Hu (Tencent Inc.); Xiaosen Li (Tencent Inc.); Wen Ouyang (Tencent Inc.); Zhitao Wang (Tencent Inc.); Fangcheng Fu (Peking University); Bin Cui (Peking University)
Combo-Fashion: Fashion Clothes Matching CTR Prediction with Item History	Chenxu Zhu (Shanghai Jiao Tong University)*; Peng Du (Alibaba); Weinan Zhang (Shanghai Jiao Tong University); Yong Yu (Shanghai Jiao Tong University); Yang Cao (Vision & Beauty Team, Alibaba Group)

User-tag Profile Modeling in Recommendation System via Contrast Weighted Tag Masking	Chenxu Zhu (Shanghai Jiao Tong University)*; Peng Du (Alibaba); Xianghui Zhu (SJTU); Weinan Zhang (Shanghai Jiao Tong University); Yong Yu (Shanghai Jiao Tong University); Yang Cao (Vision & Beauty Team, Alibaba Group)
EdgeWatch: Collaborative Investigation of Data Integrity at the Edge based on Blockchain	BO LI (Swinburne University of Technology)*; Qiang He (Swinburne University of Technology); Liang Yuan (Swinburne University of Technology); Feifei Chen (Deakin University); Lingjuan Lyu (Sony AI); Yun Yang (Swinburne University of Technology)
Unsupervised Learning Style Classification for Learning Path Generation in Online Education Platforms	Zhicheng He (Huawei Noah's Ark Lab)*; Wei Xia (Huawei Noah's Ark Lab); KAI DONG (huawei); Huifeng Guo (Huawei Noah's Ark Lab); Ruiming Tang (Huawei Noah's Ark Lab); dingyin xia (huawei); Rui Zhang (ruizhang.info)
COSSUM: Towards Conversation-Oriented StructuredSummarization for Automatic Medical Insurance Assessment	Sheng Xu (Peking University)*; Xiaojun Wan (Peking University); Sen Hu (Ant Group); Mengdi Zhou (Ant Group); Teng Xu (Ant Group); Hongbin Wang (Ant Group); Haitao Mi (Ant Group)
FedAttack: Effective and Covert Poisoning Attack on Federated Recommendation via Hard Sampling	Chuhan Wu (Tsinghua University)*; Fangzhao Wu (MSRA); Tao Qi (Tsinghua University); Yongfeng Huang (Tsinghua University); Xing Xie (Microsoft Research Asia)
Training Large-Scale News Recommenders with Pretrained Language Models in the Loop	Shitao Xiao (BUPT)*; Zheng Liu (MSRA); Yingxia Shao (BUPT); Tao Di (microsoft); Fangzhao Wu (Microsoft Research Asia); Bhuvan Middha (Microsoft); Xing Xie (Microsoft Research Asia)
Graph Attention Multi-Layer Perceptron	Wentao Zhang (Peking University)*; Ziqi Yin (BeiJing Institute of Technology); Zeang Sheng (Peking University); Yang Li (Peking University); wen ouyang (tencent); Xiaosen Li (Tencent Inc.); Yangyu Tao (Tencent); Zhi Yang (Peking University); Bin Cui (Peking University)
Intelligent Request Strategy Design in Recommender System	Xufeng Qian (Alibaba Group)*; Yue Xu (Alibaba Group); Fuyu Lv (Alibaba Group); Shengyu Zhang (Zhejiang University); Ziwen Jiang (Alibaba); Qingwen Liu (Alibaba Group); Xiaoyi Zeng (Alibaba Group); Tat-Seng Chua (National university of Singapore); Fei Wu (Zhejiang University, China)
Medical Symptom Detection in Intelligent Pre-Consultation using Bi-directional Hard-Negative Noise Contrastive Estimation	Shiwei Zhang (Tencent Jarvis Lab)*; JiChao Sun (Tencent Jarvis Lab); Yu Huang (Tencent Jarvis Lab); Xueqi Ding (Tencent); Yefeng Zheng (Tencent)
Contrastive Cross-domain Recommendation in Matching	Ruobing Xie (WeChat Search Application Department, Tencent)*; Qi Liu (Tencent); Liangdong Wang (WeChat, Tencent); Shukai Liu (Tencent); Bo Zhang (WeChat Search Application Department, Tencent); Leyu Lin (WeChat Search Application Department, Tencent)
Feature-aware Diversified Re-ranking with Disentangled Representations for Relevant Recommendation	Zihan Lin (Renmin University of China)*; Hui Wang (Renmin University of China); Jingshu Mao (Kuaishou Inc); Wayne Xin Zhao (Renmin University of China); Cheng Wang (Kuaishou Inc); Peng Jiang (Kuaishou Inc.); Ji-Rong Wen (Renmin University of China)
JiuZhang: A Chinese Pre-trained Language Model for Mathematical Problem Understanding	Wayne Xin Zhao (Renmin University of China); Kun Zhou (Renmin University of China)*; Zheng Gong (Renming University of China); Beichen Zhang (Renmin University of China); Yuanhang Zhou (Renmin University of China); Jing Sha (iFLYTEK Research); Zhigang Chen (iFLYTEK CO., LTD); Shijin WANG (State Key Laboratory of Cognitive Intelligence); Cong Liu (iFLYTEK Research); Ji-Rong Wen (Renmin University of China)
Regional-Local Adversarially Learned One-Class Classifier Anomalous Sound Detection in Global Long-Term Space	Yu Sha (Xidian University, Frankfurt Institute for Advanced Studies)*; Faber Johannes (Frankfurt Institute for Advanced Studies); Shuiping Gou (Xidian University); Bo Liu (Xidian University); Wei Li (Frankfurt Institute for Advanced Studies); Stefan Schramm (Frankfurt Institute for Advanced Studies); Horst Stoecker (Frankfurt Institute for Advanced Studies); Thomas Steckenreiter (SAMSON AG); Domagoj Vnucec (SAMSON AG); Nadine Wetzstein (SAMSON AG); Andreas Widl (SAMSON AG); Kai Zhou (Frankfurt Institute for Advanced Studies)
A Tuning-free Framework for Exploiting Pre-trained Language Models in Knowledge Grounded Dialogue Generation	Jifan Yu (Tsinghua University)*; Xiaohan Zhang (Tsinghua University); Yifan Xu; Xuanyu Lei (Tsinghua University); Xinyu Guan (biendata); Jing Zhang (Renmin University of China); Lei Hou (Tsinghua University); Juanzi Li (Tsinghua University); Jie Tang (Tsinghua University)
Talent Demand-Supply Joint Prediction with Dynamic Heterogeneous Graph Enhanced Meta-Learning	Zhuoning Guo (Harbin Institute of Technology)*; Hao Liu (HKUST); Le Zhang (University of Science and Technology of China); Qi Zhang (University of Science and Technology of China); Hengshu Zhu (Baidu Talent Intelligence Center, Baidu Inc.); Hui Xiong (Hong Kong University of Science and Tech)
Few-shot Learning for Trajectory-based Mobile Game Cheating Detection	Yueyang Su (Institute of Computing Technology, Chinese Academ); Di Yao (Institute of Computing Technology, Chinese Academy of Sciences); Xiaokai Chu (Institute of Computing Technology, Chinese Academy of Sciences, University of Chinese Academy of Sciences); Wenbin Li (Institute of Computing Technology, Chinese Academy of Sciences); Jingping Bi (Institute of Computing Technology, Chinese Academy of Sciences)*; Shiwei Zhao (NetEase Fuxi AI Lab); Runze Wu (NetEase Fuxi AI Lab); Shize Zhang (NetEase Fuxi AI Lab); Jianrong Tao (Netease); Hao Deng (NetEase)
Device-Cloud Collaborative Recommendation via Meta Controller	Jiangchao Yao (Shanghai Jiao Tong University)*; Feng 8 Wang (Alibaba Group); XICHEN DING (Ant Group); SHAOHU CHEN (Ant Group); Bo Han (HKBU / RIKEN); Jingren Zhou (Alibaba Group); Hongxia Yang (Alibaba Group)
Learning to Discover Causes of Traffic Congestion with Limited Labeled Data	Mudan Wang (Tsinghua University); Huan Yan (Tsinghua University)*; Hongjie Sui (Tsinghua University); Fan Zuo (Alibaba Group); Yue Liu (Alibaba Group); Yong Li (Tsinghua University)
Spatio-Temporal Vehicle Trajectory Recovery on Road Network Based on Traffic Camera Video Data	Fudan Yu (Tsinghua University); Wenxuan Ao (Tsinghua University); Huan Yan (Tsinghua University)*; Guozhen Zhang (Tsinghua University); Wei Wu (SenseTime Group Limited); Yong Li (Tsinghua University)
Friend Recommendations with Self-Rescaling Graph Neural Networks	Xiran Song (Huazhong University of Science and Technology); Jianxun Lian (MSRA); Hong Huang (Huazhong University of Science and Technology)*; Mingqi Wu (Microsoft Gaming, Redmond); Hai Jin (Huazhong University of Science and Technology); Xing Xie (Microsoft Research Asia)
DDR: Dialogue based Doctor Recommendation for Online Medical Service	Zhi Zheng (University of Science and Technology of China)*; Zhaopeng Qiu (Tencent Medical AI Lab); Tong Xu (University of Science and Technology of China); Xian Wu (Tencent Medical AI Lab); Xiangyu Zhao (City University of Hong Kong); Enhong Chen (University of Science and Technology of China); Hui Xiong (Rutgers University)

A Framework for Multi-stage Bonus Allocation in meal delivery Platform	zhuolin wu (meituan)*; li wang (Huazhong University of Science and Technology); Fangsheng Huang (Meituan); Linjun Zhou (Meituan); Yu Song (Meituan); chengpeng ye (meituan); pengyu nie (meituan); Hao Ren (Meituan); Jinghua Hao (Meituan); Renqing He (Meituan-Dianping Group); Zhizhao Sun (Meituan-Dianping Group)
Adaptive Feature Selection in Deep Recommender Systems	Weilin LIN (City University of HongKong); Xiangyu Zhao (City University of Hong Kong)*; Yejing Wang (City University of Hongkong); Tong Xu (University of Science and Technology of China); Xian Wu (Tencent Medical AI Lab)
Uni-Retriever: Towards Learning The Unified Embedding Based Retriever in Bing Sponsored Search	Jianjin Zhang (Microsoft, Beijing)*; Zheng Liu (MSRA); Weihao Han (Microsoft); Shitao Xiao (BUPT); Ruicheng Zheng (Microsoft STCA); Yingxia Shao (BUPT); Hao Sun (Microsoft); hanqing zhu (Microsoft); Premkumar Srinivasan (Microsoft); Weiwei Deng (Microsoft); Qi Zhang (Microsoft); Xing Xie (Microsoft Research Asia)
CausalInt: Causal Inspired Intervention for Multi-Domain Recommendation	Yichao Wang (Huawei Noah's Ark Lab)*; Huifeng Guo (Huawei Noah's Ark Lab); Bo Chen (Huawei Noah's Ark Lab); Weiwen Liu (Huawei Noah's Ark Lab); Zhirong Liu (Huawei Noah's Ark Lab); Qi Zhang (Huawei Noah's Ark Lab); Zhicheng He (Huawei Noah's Ark Lab); Hongkun Zheng (Huawei Technologies Co Ltd); Weiwei Yao (Huawei); Muyu Zhang (Huawei); Zhenhua Dong (Huawei Noah's Ark Lab); Ruiming Tang (Huawei Noah's Ark Lab)