JoinQuant | Quant Research & AI Algorithms | 2026.01 – Present

Songning Lai

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Website: xll0328.github.io Google Scholar Citations 684 h-index 11 i10-index 15

Trustworthy AI | Concept Bottleneck Models | Robustness | Safety | Quant Research

Education

Shandong University, B.Eng. in Communication Engineering 2020.09 - 2024.06

- School of Information Science and Engineering (website), top-tier undergraduate honors track.
- Outstanding graduate at Shandong Province and Shandong University; Outstanding Undergraduate Thesis.
- Average score: 86.3/100.
- Early research training in computer vision, multimodal learning, and trustworthy artificial intelligence under Prof. Zhi Liu.

Research Profile

- My research centers on Trustworthy Artificial Intelligence, especially explainability, faithfulness, robustness, and safety, with Concept Bottleneck Models as a core methodological line for inspectable, editable, verifiable, and transferable learning systems.
- The storyline starts from one practical question: why models fail silently in real deployment. I first build concept-level representations and learning mechanisms (ICLR 2024, ACM MM 2025, ECCV 2026), then study concept-level security, noisy semi-supervision, and medical Concept Bottleneck Models (TMLR 2026, MICCAI 2026, ICANN 2026), and extend the same reliability view to medical artificial intelligence, time-series forecasting, autonomous driving, and large language model knowledge editing (NeurIPS 2024, ICASSP 2026, ICRA 2025, ICLR 2026). Additional collaborator papers are listed in my complete publication map.

Work and Research Experience

JoinQuant, Quantitative Researcher / Artificial Intelligence Algorithms 2026.01 - Present

- Led research on factor modeling, generalization strategies, and strategy deployment for quantitative trading.
- Built baseline factor models for minute-level futures, and transferred published generalization frameworks to improve modeling quality under realistic constraints.
- Standardized automated training and hyperparameter-search workflows; some outputs have entered production and several ideas are in engineering handoff.

JoinQuant, Artificial Intelligence Intern, Quantitative Research 2025.11 - 2026.01

- Built an end-to-end single-instrument factor pipeline (single futures contract) from minute-frequency data processing to evaluation.
- Validated the practical transferability of trustworthy artificial intelligence and model generalization methods in trading research settings.

Hong Kong University of Science and Technology (Guangzhou), Research Assistant 2024.04 - 2025.09

- Worked on Concept Bottleneck Models, faithfulness, robustness, and large language model explainability under Prof. Yutao Yue.
- Contributed as first, co-first, or corresponding author to outputs in ICLR, NeurIPS, ACM MM, TMLR, ECCV, MICCAI, ICRA, and related directions; involved in multimodal, time-series, medical artificial intelligence, and autonomous-driving projects.

KAUST, Remote Research Intern 2023.04 - 2024.04

- Worked with Prof. Di Wang and Dr. Lijie Hu (now Assistant Professor at MBZUAI) on trustworthy artificial intelligence, concept bottleneck modeling, explainability, and robustness.
- Contributed to publications around ICLR 2024 / NeurIPS 2024 / ICRA-related work.

Publications (Full List as First / Co-first / Corresponding Author)

2026

(* equal contribution; ∼ corresponding author)

Accepted Dynamic-V2C: Editable and Continual Vision-to-Concept Bottleneck Models via Influence Functions, Songning Lai, Shaofeng Liang, Jiayu Yang, Ninghui Feng, Yuxuan Fan, Wenshuo Chen, ECCV 2026 CCF B.

Accepted SANT-CBM: Structurally-Aware and Noise-Tolerant Semi-supervised Concept Bottleneck Models, HongWei Liu, Jia Liu, Songning Lai∼, MICCAI 2026 CCF B.

Accepted Concept-Consistent Semi-Supervised Learning for Concept Bottleneck Models via Confidence-Guided Pseudo-Label Propagation, Yayue Mai, Songning Lai∼, ICANN 2026 CCF C.

Accepted Multimodal Deception in Explainable AI: Concept-Level Backdoor Attacks on Concept Bottleneck Models, Songning Lai, Jiayu Yang, Yu Huang, Lijie Hu, Tianlang Xue, Zhangyi Hu, Jiaxu Li, Haicheng Liao, Zongyang Liu, Yutao Yue, TMLR 2026.

Accepted ACE: Attribution-Controlled Knowledge Editing for Multi-hop Factual Recall, Jiayu Yang*, Yuxuan Fan*, Songning Lai*, Shengen Wu, Jiaqi Tang, Chun Kang, Zhijiang Guo, Yutao Yue, ICLR 2026 CCF A Core A*.

Accepted Towards Reliable Time Series Forecasting under Future Uncertainty: Ambiguity and Novelty Rejection Mechanisms, Ninghui Feng*, Songning Lai*, Xin Zhou, Jiayu Yang, Kunlong Feng, Zhenxiao Yin, Fobao Zhou, Zhangyi Hu, Yutao Yue, Yuxuan Liang, Boyu Wang, Hang Zhao, ICASSP 2026 CCF B Core A.

2025 (* equal contribution; ∼ corresponding author)

Accepted Learning New Concepts, Remembering the Old: Continual Learning for Multimodal Concept Bottleneck Models, Songning Lai, Mingqian Liao, Zhangyi Hu, Jiayu Yang, Wenshuo Chen, Hongru Xiao, Jianheng Tang, Haicheng Liao, Yutao Yue, ACM MM 2025 CCF A Core A*.

Accepted From Guesswork to Guarantee: Towards Faithful Multimedia Web Forecasting with TimeSieve, Songning Lai, Ninghui Feng, Jiechao Gao, Hao Wang, Haochen Sui, Xin Zou, Jiayu Yang, Wenshuo Chen, Lijie Hu, Hang Zhao, Xuming Hu, Yutao Yue, ACM MM 2025 CCF A Core A*.

Accepted DRIVE: Dependable Robust Interpretable Visionary Ensemble Framework in Autonomous Driving, Songning Lai, Tianlang Xue, Hongru Xiao, Lijie Hu, Jiemin Wu, Ninghui Feng, Runwei Guan, Haicheng Liao, Zhenning Li, Yutao Yue, ICRA 2025 CCF B Core A*.

Accepted Stable Vision Concept Transformers for Medical Diagnosis, Lijie Hu*, Songning Lai*, Yuan Hua, Shu Yang, Jingfeng Zhang, Di Wang, ECML-PKDD 2025 CCF B Core A.

Accepted PEPL: Precision-Enhanced Pseudo-Labeling for Fine-Grained Image Classification in Semi-Supervised Learning, Bowen Tian*, Songning Lai*, Lujundong Li, Zhihao Shuai, Runwei Guan, Tian Wu, Yutao Yue, ICASSP 2025 CCF B Core B.

2024 and Earlier (* equal contribution; ∼ corresponding author)

Accepted Faithful Vision-Language Interpretation via Concept Bottleneck Models, Songning Lai, Lijie Hu, Junxiao Wang, Laure Berti, Di Wang, ICLR 2024 CCF A Core A*.

Accepted Towards Multi-dimensional Explanation Alignment for Medical Classification, Lijie Hu*, Songning Lai*, Wenshuo Chen*, Hongru Xiao, Hongbin Lin, Lu Yu, Jingfeng Zhang, Di Wang, NeurIPS 2024 CCF A Core A*.

Accepted Shared and Private Information Learning in Multimodal Sentiment Analysis with Deep Modal Alignment and Self-supervised Multi-task Learning, Songning Lai, Jiakang Li, Guinan Guo, Xifeng Hu, Yulong Li, Yuan Tan, Zichen Song, Yutong Liu, Zhaoxia Ren∼, Chun Wang∼, Danmin Miao∼, Zhi Liu∼, IJCNN 2024 CCF C.

Accepted A Comprehensive Review of Community Detection in Graphs, Jiakang Li*, Songning Lai*, Zhihao Shuai, Yuan Tan, Yifan Jia, Mianyang Yu, Zichen Song, Xiaokang Peng, Ziyang Xu, Yongxin Ni, Haifeng Qiu, Jiayu Yang, Yutong Liu, Yonggang Lu∼, Neurocomputing JCR Q1 CCF C.

Accepted Multimodal Sentiment Analysis: A Survey, Songning Lai, Haoxuan Xu, Xifeng Hu, Zhaoxia Ren∼, Zhi Liu∼, Displays JCR Q1.

Accepted Cross-domain Car Detection Model with Integrated Convolutional Block Attention Mechanism, Haoxuan Xu*, Songning Lai*, Yang Yang∼, Image and Vision Computing JCR Q1 CCF C.

Accepted Predicting Lysine Phosphoglycerylation Sites using BERT and Protein Feature Extraction/Selection, Songning Lai, Xifeng Hu, Jing Han, Chun Wang, Subhas Mukhopadhyay, Zhi Liu∼, Lan Ye∼, CISP-BMEI 2022 Best Paper.

Honors, Service, and Leadership

- Nexus Robotics Lab / HKUST(GZ) Deep Robotics Team: world 1st place in the What Bimanuals Can Do (WBCD) 2026 Logistics Picking global rankings @ ICRA 2026; 1st place at the Shanghai site.
- ACM TheWebConf 2026 (WWW 2026) Workshop TIME Best Paper Runner-Up Award.
- NeurIPS 2024 Travel Award.
- ICRA 2025 Travel Award.
- IEEE/EI (CISP-BMEI 2022) Best Paper Award.
- Undergraduate Mathematical Contest in Modeling: National First Prize (top 0.6%).
- MathorCup National Mathematical Modeling Challenge: First Prize (top 3%).
- National Undergraduate Electronics Design Contest (Shandong): Second Prize.
- National Crypto-math Challenge (East China): Second Prize.
- Outstanding graduate of Shandong Province; Outstanding Graduate of Shandong University.
- Over 40 university-level honors (research, competitions, social contribution).

Academic Service and Other Experience

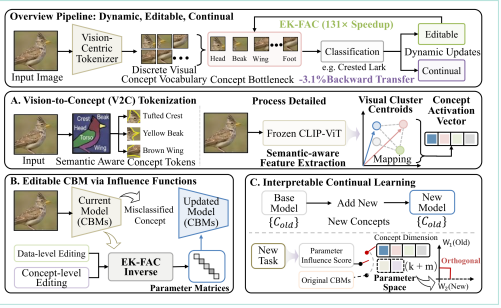
- Reviewer: ECAI, EMNLP, ICML, KDD, ICLR, CVPR, ICCV, NeurIPS, ACM MM, IJCAI, AAAI, and related venues.
- Student leadership: Monitor of Chongxin Honors Program (class recognized as Shandong Provincial Excellent Class and Shandong University Top Ten Class).
- Volunteer service: 130+ hours.

Appendix A: Ten Representative Works

The order foregrounds the core trustworthy concept-bottleneck line first, then extends to LLM editing, reliable forecasting, autonomous driving/robotics, and medical AI.

01 Dynamic-V2C: Editable and Continual CBMs

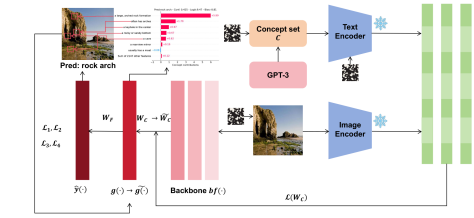
ECCV 2026 | First author | Trustworthy CBMs



Paper Dynamic-V2C: Editable and Continual Vision-to-Concept Bottleneck Models via Influence Functions.
Challenge Deployed Concept Bottleneck Models are hard to maintain when spurious concepts, data unlearning, or concept expansion are needed, because full retraining is usually required.
Method Dynamic-V2C builds visually grounded concept tokenization and confines influence-function editing to the compact concept bottleneck, enabling retraining-free unlearning, spurious debugging, and continual concept expansion.
Signal It turns CBMs from static interpretable models into editable and continually maintainable trustworthy learning systems.

02 FVLC: Faithful Vision-Language Interpretation

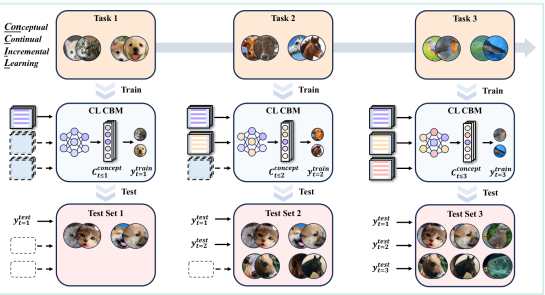
ICLR 2024 | First author | Faithfulness



Paper Faithful Vision-Language Interpretation via Concept Bottleneck Models.
Challenge Label-free CBMs can produce automatic concept explanations, but the explanations and predictions are unstable under concept-word, text-embedding, and input perturbations.
Method FVLC formalizes faithful vision-language concepts and optimizes concept-level and prediction-level stability under multiple perturbation types.
Signal This work initiated my main research line on faithful, robust, and verifiable concept-level explanations.

03 CONCIL: Continual Multimodal CBMs

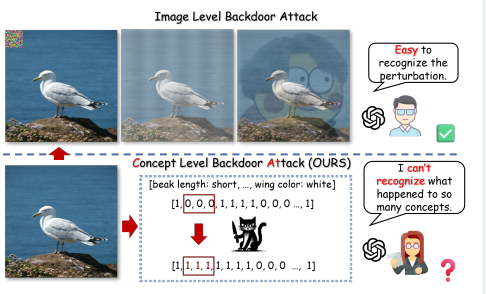
ACM MM 2025 | First author | Continual learning



Paper Learning New Concepts, Remembering the Old: Continual Learning for Multimodal Concept Bottleneck Models.
Challenge Standard CBMs assume fixed concept and class vocabularies, limiting their use when new concepts and classes arrive continuously.
Method CONCIL formulates concept-incremental and class-incremental CBM learning, and updates concept and decision layers through recursive analytic solutions to reduce forgetting efficiently.
Signal It connects interpretability with continual learning and emphasizes long-term memory, updateability, and maintainability.

04 CAT / CAT+: Concept-Level Backdoor Attacks

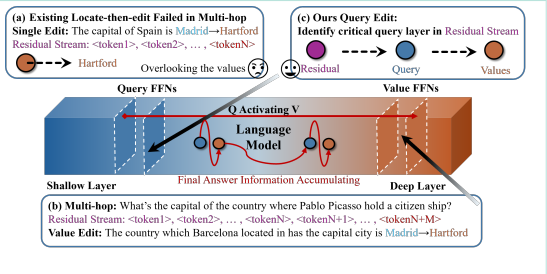
TMLR 2026 | First author | Security evaluation



Paper Multimodal Deception in Explainable AI: Concept-Level Backdoor Attacks on Concept Bottleneck Models.
Challenge CBMs offer transparency through human-understandable concepts, but the concept bottleneck can itself become a stealthy attack surface.
Method CAT and CAT+ perform concept-level backdoor attacks through filtered trigger concepts and concept-correlation optimization, while preserving clean-data performance; Image2Trigger_c validates end-to-end feasibility.
Signal The work stress-tests the assumption that interpretability implies trustworthiness and motivates systematic security evaluation for concept-based models.

05 ACE: Attribution-Controlled Knowledge Editing

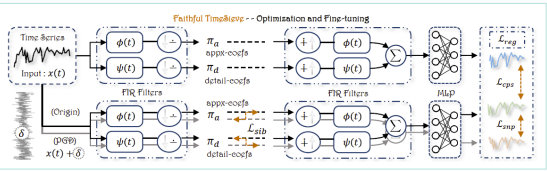
ICLR 2026 | Co-first author | LLM controllability



Paper ACE: Attribution-Controlled Knowledge Editing for Multi-hop Factual Recall.
Challenge Existing knowledge editing methods degrade in multi-hop factual recall, especially when the edited fact involves implicit intermediate subjects in a reasoning chain.
Method ACE uses neuron-level attribution to identify query-value pathways and edits both critical query and value layers so that updated knowledge can be activated through multi-hop reasoning.
Signal This work extends my trustworthy AI line to controllable and maintainable large language model knowledge editing.

06 FTS / TimeSieve: Faithful Web Forecasting

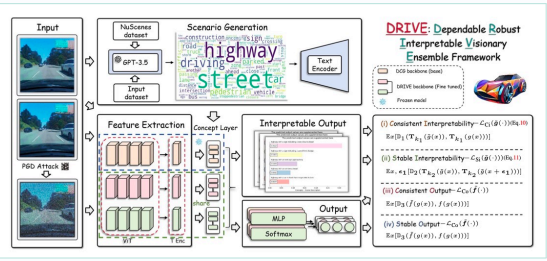
ACM MM 2025 | First author | Reliable forecasting



Paper From Guesswork to Guarantee: Towards Faithful Multimedia Web Forecasting with TimeSieve.
Challenge Multimedia web forecasting models can be unstable under random seeds, input perturbations, layer perturbations, and parameter perturbations, weakening prediction reliability and faithfulness.
Method Faithful TimeSieve (FTS) systematically detects and mitigates unfaithfulness in TimeSieve, improving stability, consistency, and robustness while preserving forecasting quality.
Signal This work extends my faithfulness line from CBMs to reliable time-series and multimedia forecasting tasks.

07 DRIVE: Interpretable Autonomous Driving

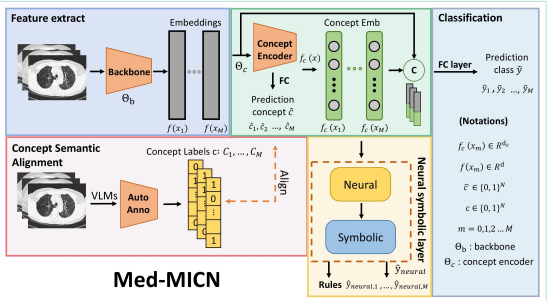
ICRA 2025 | First author | Autonomous driving



Paper DRIVE: Dependable Robust Interpretable Visionary Ensemble Framework in Autonomous Driving.
Challenge End-to-end autonomous driving models often lack stable and trustworthy explanations; concept-level explanations and outputs can become inconsistent under perturbations or scenario changes.
Method DRIVE defines consistent/stable interpretability and consistent/stable output, then builds an optimization framework and metrics for concept-based autonomous driving models.
Signal This work represents my autonomous driving and robotics-facing trustworthy AI work at ICRA, connecting interpretability with real driving reliability.

08 Med-MICN: Multi-dimensional Explanation Alignment

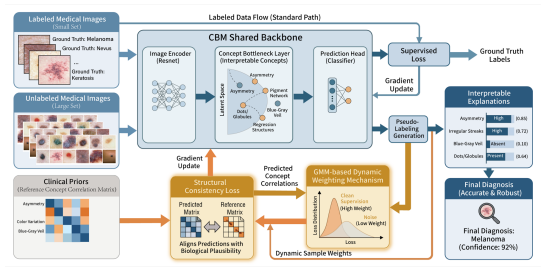
NeurIPS 2024 | Co-first author | Medical trustworthy AI



Paper Towards Multi-dimensional Explanation Alignment for Medical Classification.
Challenge Medical AI requires performance together with concept semantics, visual evidence, and reasoning rules; a single explanation view is often insufficient for expert inspection.
Method Med-MICN aligns concept semantics, neural-symbolic reasoning, and saliency explanations in one medical classification framework.
Signal It demonstrates how concept-level interpretability can be deployed in high-stakes medical settings and links method design with practical expert-facing validation.

09 SANT-CBM: Semi-supervised Medical CBMs

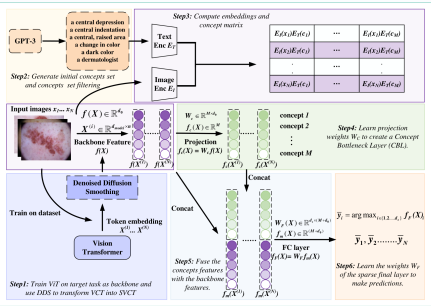
MICCAI 2026 | Corresponding author | Medical concepts



Paper SANT-CBM: Structurally-Aware and Noise-Tolerant Semi-supervised Concept Bottleneck Models.
Challenge Medical CBMs in label-scarce settings are vulnerable to noisy pseudo concept labels, and predicted concepts may violate clinically meaningful correlation structures.
Method SANT-CBM combines GMM-based dynamic weighting for noisy pseudo-labels with structural consistency that aligns predicted concept correlations with clinical priors.
Signal It pushes CBMs toward label-efficient, interpretable, and clinically plausible medical diagnosis systems.

10 SVCT: Stable Vision Concept Transformers

ECML-PKDD 2025 | Co-first author | Robust medical explanation



Paper Stable Vision Concept Transformers for Medical Diagnosis.
Challenge Medical visual explanations need both diagnostic performance and stable concept outputs, but existing concept methods can change under input perturbations.
Method SVCT integrates Vision Transformers, concept-feature fusion, and denoised diffusion smoothing to stabilize top-k concepts and predictions under perturbations.
Signal The work shows that concept explanations in medical AI should be readable, stable, and robust under realistic input variation.

Appendix B: Complete Publication List

Note: Organized from the complete Publication List on the personal website. * denotes equal contribution; ∼ denotes corresponding author; my name is highlighted in rose, and venues are highlighted in orange.

2026

CONFERENCE PAPERS

1. Dynamic-V2C: Editable and Continual Vision-to-Concept Bottleneck Models via Influence Functions, Songning Lai, Shaofeng Liang, Jiayu Yang, Ninghui Feng, Yuxuan Fan, Wenshuo Chen, ECCV 2026 (CCF B, Accepted).
2. AnaPFL: When Closed-Form Solutions Meet Generalization and Personalization in Personalized Federated Learning, Kejia Fan, Jianheng Tang, Zhirui Yang, Feijiang Han, Yajiang Huang, Run He, Jiaxu Li, Songning Lai, Anfeng Liu, Houbing Herbert Song, Yunhuai Liu, Huiping Zhuang, ECCV 2026 (CCF B, Accepted).
3. SANT-CBM: Structurally-Aware and Noise-Tolerant Semi-supervised Concept Bottleneck Models, HongWei Liu, Jia Liu, Songning Lai∼, MICCAI 2026 (CCF B, Accepted).
4. Concept-Consistent Semi-Supervised Learning for Concept Bottleneck Models via Confidence-Guided Pseudo-Label Propagation, Yayue Mai, Songning Lai∼, ICANN 2026 (CCF C, Accepted).
5. ACE: Attribution-Controlled Knowledge Editing for Multi-hop Factual Recall, Jiayu Yang*, Yuxuan Fan*, Songning Lai*, Shengen Wu, Jiaqi Tang, Chun Kang, Zhijiang Guo, Yutao Yue, ICLR 2026 (CCF A).
6. Towards Reliable Time Series Forecasting under Future Uncertainty: Ambiguity and Novelty Rejection Mechanisms, Ninghui Feng*, Songning Lai*, Xin Zhou, Jiayu Yang, Kunlong Feng, Zhenxiao Yin, Fobao Zhou, Zhangyi Hu, Yutao Yue, Yuxuan Liang, Boyu Wang, Hang Zhao, ICASSP 2026 (CCF B).
7. Free-T2M: Frequency-Aware Coarse-to-Fine Text-to-Motion Generation, Wenshuo Chen, Haozhe Jia, Songning Lai, Lei Wang, Pengyu Yin, Shaofeng Liang, Yuqi Lin, Hongru Xiao, Lijie Hu, Yutao Yue, ACM MM 2026 Brave New Ideas Track (CCF A, Poster, Accepted).
8. Delta Score Matters! Spatial Adaptive Multi Guidance in Diffusion Models, Haosen Li, Wenshuo Chen, Lei Wang, Shaofeng Liang, Bowen Tian, Songning Lai, Yutao Yue, ACM MM 2026 Brave New Ideas Track (CCF A, Oral, Accepted).
9. When Efficiency Becomes Fragility: Exploiting Dynamic Routing Vulnerabilities in Adaptive UAV Tracking, Shaofeng Liang, Runwei Guan, Wenshuo Chen, Jiemin Wu, Bowen Tian, Haozhe Jia, Kaishen Yuan, Songning Lai, Daizong Liu, Yutao Yue, ACM MM 2026 Main Track (CCF A, Accepted).

JOURNAL / JOURNAL-STYLE PUBLICATIONS

1. Multimodal Deception in Explainable AI: Concept-Level Backdoor Attacks on Concept Bottleneck Models, Songning Lai, Jiayu Yang, Yu Huang, Lijie Hu, Tianlang Xue, Zhangyi Hu, Jiaxu Li, Haicheng Liao, Zongyang Liu, Yutao Yue, TMLR 2026 (Accepted).
2. TPTD: A Trusted Privacy-Preserving Truth Discovery Scheme for Quality Enhancement in Team-based Mobile Crowd Sensing, Yajiang Huang, Yipu Gong, Yanbo Zhai, Songning Lai, Anfeng Liu, Tian Wang, Mianxiong Dong, Houbing Herbert Song, Knowledge-Based Systems (JCR Q1, IF: 7.2).

2025

CONFERENCE PAPERS

1. Learning New Concepts, Remembering the Old: Continual Learning for Multimodal Concept Bottleneck Models, Songning Lai, Mingqian Liao, Zhangyi Hu, Jiayu Yang, Wenshuo Chen, Hongru Xiao, Jianheng Tang, Haicheng Liao, Yutao Yue, ACM MM 2025 (CCF A, Core A*).
2. From Guesswork to Guarantee: Towards Faithful Multimedia Web Forecasting with TimeSieve, Songning Lai, Ninghui Feng, Jiechao Gao,

Hao Wang, Haochen Sui, Xin Zou, Jiayu Yang, Wenshuo Chen, Lijie Hu, Hang Zhao, Xuming Hu, Yutao Yue, ACM MM 2025 (CCF A, Core A*).

3. DRIVE: Dependable Robust Interpretable Visionary Ensemble Framework in Autonomous Driving, Songning Lai*, Tianlang Xue*, Hongru Xiao, Lijie Hu, Jiemin Wu, Ninghui Feng, Runwei Guan, Haicheng Liao, Zhenning Li, Yutao Yue, ICRA 2025 (CCF B, Core A*).
4. Stable Vision Concept Transformers for Medical Diagnosis, Lijie Hu*, Songning Lai*, Yuan Hua, Shu Yang, Jingfeng Zhang, Di Wang, ECML-PKDD 2025 (CCF B, Core A).
5. PEPL: Precision-Enhanced Pseudo-Labeling for Fine-Grained Image Classification in Semi-Supervised Learning, Bowen Tian*, Songning Lai*, Lujundong Li, Zhihao Shuai, Runwei Guan, Tian Wu, Yutao Yue, ICASSP 2025 (CCF B, Core B).
6. IMTS is Worth Time X Channel Patches: Visual Masked Autoencoders for Irregular Multivariate Time Series Prediction, Zhangyi Hu, Jiemin Wu, Hua Xu, Minqian Liao, Ninghui Feng, Bo Gao, Songning Lai, Yutao Yue, ICML 2025 (CCF A, Core A*).
7. Physics-Informed Representation Alignment for Sparse Radio-Map Reconstruction, Jia Haozhe, Wenshuo Chen, Huang Zhihui, Lei Wang, Hongru Xiao, Jia Nanqian, Keming Wu, Songning Lai, Bowen Tian, Yutao Yue, ACM MM 2025 (CCF A, Core A*).
8. Can Audio Language Models Listen Between the Lines? A Study on Metaphorical Reasoning via Unspoken, Hongru Xiao, Xiang Li, Duyi Pan, Longfei Zhang, Zhixue Song, Jiale Han, Songning Lai, Wenshuo Chen, Jing Tang, Benyou Wang, ACM MM 2025 (CCF A, Core A*).
9. ANT: Adaptive Neural Temporal-Aware Text-to-Motion Model, Wenshuo Chen, Kuimou Yu, Jia Haozhe, Kaishen Yuan, Zexu Huang, Bowen Tian, Songning Lai, Hongru Xiao, Erhang Zhang, Lei Wang, Yutao Yue, ACM MM 2025 (CCF A, Core A*).
10. Text2Weight: Bridging Natural Language and Neural Network Weight Spaces, Bowen Tian, Wenshuo Chen, Zexi Li, Songning Lai, Jiemin Wu, Yutao Yue, ACM MM 2025 (CCF A, Core A*).
11. CFSSeg: Closed-Form Solution for Class-Incremental Semantic Segmentation of 2D Images and 3D Point Clouds, Jiaxu Li, Rui Li, Jianyu Qi, Songning Lai, Linpu Lv, Kejia Fan, Jianheng Tang, Yutao Yue, Dongzhan Zhou, Yunhuai Liu, Huiping Zhuang, ACM MM 2025 (CCF A, Core A*).
12. Beyond Patterns: Harnessing Causal Logic for Autonomous Driving Trajectory Prediction, Bonan Wang, Haicheng Liao, Chengyue Wang, Bin Rao, Yanchen Guan, Guyang Yu, Jiaxun Zhang, Songning Lai, Chengzhong Xu, Zhenning Li, IJCAI 2025 (CCF A, Core A*).

JOURNAL PAPERS

1. Boosting Expertise and Efficiency in LLM: A Knowledge-Enhanced Framework for Construction Support, Bin Yang, Hongru Xiao, Zixuan Zeng, Songning Lai, Jiale Han, Yanke Tan, Yiqing Ni, Alexandria Engineering Journal (JCR Q1, IF: 6.8).
2. Generative Knowledge-Guided Review System for Construction Disclosure Documents, Hongru Xiao, Jiankun Zhuang, Bin Yang, Jiale Han, Yantao Yu, Songning Lai, Advanced Engineering Informatics (JCR Q1, IF: 9.9, CCF B).
3. Automated Detection of Complex Construction Scenes Using a Lightweight Transformer-based Method, Hongru Xiao, Bin Yang, Yujie Lu, Wenshuo Chen, Songning Lai, Biaoli Gao, Automation in Construction (JCR Q1, IF: 9.6).
4. Enhancing Domain Adaptation for Plant Diseases Detection through Masked Image Consistency in Multi-Granularity Alignment, Guinan Guo, Songning Lai, Qingyang Wu, Yuntao Shou, Wenxu Shi, Expert Systems With Applications (JCR Q1, IF: 8.4, CCF C).
5. Da Yu: Towards USV-Based Image Captioning for Waterway Surveillance and Scene Understanding, Runwei Guan, Ningwei Ouyang, Tianhao Xu, Shaofeng Liang, Wei Dai, Yafeng Sun, Shang Gao, Songning Lai, Shanliang Yao, Xuming Hu, Ryan Wen Liu, Yutao Yue, Hui Xiong, IEEE Transactions on Circuits and Systems for Video Technology (JCR Q1, IF: 11.1, CCF B).

2024

CONFERENCE PAPERS

1. Faithful Vision-Language Interpretation via Concept Bottleneck Models, Songning Lai, Lijie Hu, Junxiao Wang, Laure Berti, Di Wang, ICLR 2024 (CCF A).
2. Towards Multi-dimensional Explanation Alignment for Medical Classification, Lijie Hu*, Songning Lai*, Wenshuo Chen*, Hongru Xiao, Hongbin Lin, Lu Yu, Jingfeng Zhang, Di Wang, NeurIPS 2024 (CCF A).
3. Shared and Private Information Learning in Multimodal Sentiment Analysis with Deep Modal Alignment and Self-supervised Multi-task Learning, Songning Lai*, Jiakang Li, Guinan Guo, Xifeng Hu, Yulong Li, Yuan Tan, Zichen Song, Yutong Liu, Zhaoxia Ren∼, Chun Wang∼, Danmin Miao∼, Zhi Liu∼, IJCNN 2024 (CCF C).
4. Predicting Lysine Phosphoglycerylation Sites using Bidirectional Encoder Representations with Transformers & Protein Feature Extraction and Selection, Songning Lai, Xifeng Hu, Jing Han, Chun Wang, Subhas Mukhopadhyay, Zhi Liu∼, Lan Ye∼, CISP-BMEI 2022 (Tsinghua B).

JOURNAL PAPERS

1. A Comprehensive Review of Community Detection in Graphs, Jiakang Li*, Songning Lai*, Zhihao Shuai, Yuan Tan, Yifan Jia, Mianyang Yu, Zichen Song, Xiaokang Peng, Ziyang Xu, Yongxin Ni, Haifeng Qiu, Jiayu Yang, Yutong Liu, Yonggang Lu∼, Neurocomputing (JCR Q1, CCF C).
2. Multimodal Sentiment Analysis: A Survey, Songning Lai, Haoxuan Xu, Xifeng Hu, Zhaoxia Ren∼, Zhi Liu∼, Displays (JCR Q1).
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