

# AAAI-24: Safe, Robust, and Responsible AI (SRRAI)



ID	Title	Authors
20	Moderate Message Passing Improves Calibration: A Universal Way to Mitigate Confidence Bias in Graph Neural Networks	Min Wang; Hao Yang; Jincui Huang; Qing Cheng
408	Self-Supervised Likelihood Estimation with Energy Guidance for Anomaly Segmentation in Urban Scenes	Yuanpeng Tu; Yuxi Li; Boshen Zhang; Liang Liu; Jiangning Zhang; Yabiao Wang; Cairong Zhao
602	Toward More Generalized Malicious URL Detection Models	Yun-Da Tsai; Cayon Liow; Yin Sheng Siang; Shou-De Lin
678	NeRFfail: Neural Radiance Fields-Based Multiview Adversarial Attack	Wenxiang Jiang; Hanwei ZHANG; Xi WANG; Zhongwen Guo; Hao Wang
1415	Accelerating Adversarially Robust Model Selection for Deep Neural Networks via Racing	Matthias König; Holger H. Hoos; Jan N. van Rijn
1421	Would You Like Your Data to Be Trained? A User Controllable Recommendation Framework	Lei Wang; Xu Chen; Zhenhua Dong; Quanyu Dai
1513	TTTS: Tree Test Time Simulation for Enhancing Decision Tree Robustness against Adversarial Examples	Seffi Cohen; Ofir Arbili; Yisroel Mirsky; Lior Rokach
1557	Invisible Backdoor Attack against 3D Point Cloud Classifier in Graph Spectral Domain	Linkun Fan; Fazhi He; Tongzhen Si; Wei Tang; Bing Li
1587	Conformal Prediction Regions for Time Series Using Linear Complementarity Programming	Matthew Cleaveland; Insup Lee; George J. Pappas; Lars Lindemann
1647	Toward Robustness in Multi-Label Classification: A Data Augmentation Strategy against Imbalance and Noise	Hwanjun Song; Minseok Kim; Jae-Gil Lee
1739	Revisiting the Information Capacity of Neural Network Watermarks: Upper Bound Estimation and Beyond	Fangqi Li; Haodong Zhao; Wei Du; Shilin Wang
2138	Sparsity-Guided Holistic Explanation for LLMs with Interpretable Inference-Time Intervention	Zhen Tan; Tianlong Chen; Zhenyu Zhang; Huan Liu
2365	Identifying Reasons for Bias: An Argumentation-Based Approach	Madeleine Waller; Odinaldo Rodrigues; Oana Cocarascu
2418	Generative Model for Decision Trees	Riccardo Guidotti; Anna Monreale; Mattia Setzu; Giulia Volpi
2613	Interpretability Benchmark for Evaluating Spatial Misalignment of Prototypical Parts Explanations	Mikołaj Sacha; Bartosz Jura; Dawid Rymarczyk; Łukasz Struski; Jacek Tabor; Bartosz Zieliński
2619	Personalization as a Shortcut for Few-Shot Backdoor Attack against Text-to-Image Diffusion Models	Yihao Huang; Felix Juefei-Xu; Qing Guo; Jie Zhang; Yutong Wu; Ming Hu; Tianlin Li; Geguang Pu; Yang Liu
2787	ORES: Open-Vocabulary Responsible Visual Synthesis	Minheng Ni; Chenfei Wu; Xiaodong Wang; Shengming Yin; Lijuan Wang; Zicheng Liu; Nan Duan
2816	CCTR: Calibrating Trajectory Prediction for Uncertainty-Aware Motion Planning in Autonomous Driving	Chengtai Cao; Xinhong Chen; Jianping Wang; Qun Song; Rui Tan; Yung-Hui Li
2946	Bidirectional Contrastive Split Learning for Visual Question Answering	Yuwei Sun; Hideya Ochiai
3097	Concealing Sensitive Samples against Gradient Leakage in Federated Learning	Jing Wu; Munawar Hayat; Mingyi Zhou; Mehrtash Harandi
3147	Trade-Offs in Fine-Tuned Diffusion Models between Accuracy and Interpretability	Mischa Dombrowski; Hadrien Reynaud; Johanna P. Müller; Matthew Baugh; Bernhard Kainz

# AAAI-24: Safe, Robust, and Responsible AI (SRRAI)



3193	Pure-Past Action Masking	Giovanni Varricchione; Natasha Alechina; Mehdi Dastani; Giuseppe De Giacomo; Brian Logan; Giuseppe Perelli
3251	Q-SENN: Quantized Self-Explaining Neural Networks	Thomas Norrenbrock; Marco Rudolph; Bodo Rosenhahn
3308	A Simple and Practical Method for Reducing the Disparate Impact of Differential Privacy	Lucas Rosenblatt; Julia Stoyanovich; Christopher Musco
3314	Physics-Informed Representation and Learning: Control and Risk Quantification	Zhuoyuan Wang; Reece Keller; Xiyu Deng; Kenta Hoshino; Takashi Tanaka; Yorie Nakahira
3331	SocialStigmaQA: A Benchmark to Uncover Stigma Amplification in Generative Language Models	Manish Nagireddy; Lamogha Chiazor; Moninder Singh; Ioana Baldini
3349	Can LLM Replace Stack Overflow? A Study on Robustness and Reliability of Large Language Model Code Generation	Li Zhong; Zilong Wang
3384	Game-Theoretic Unlearnable Example Generator	Shuang Liu; Yihan Wang; Xiao-Shan Gao
3535	Truth Forest: Toward Multi-Scale Truthfulness in Large Language Models through Intervention without Tuning	Zhongzhi Chen; Xingwu Sun; Xianfeng Jiao; Fengzong Lian; Zhanhui Kang; Di Wang; Chengzhong Xu
3656	A Framework for Data-Driven Explainability in Mathematical Optimization	Kevin-Martin Aigner; Marc Goerigk; Michael Hartisch; Frauke Liers; Arthur Miehlich
3672	MaxEnt Loss: Constrained Maximum Entropy for Calibration under Out-of-Distribution Shift	Dexter Neo; Stefan Winkler; Tsuhan Chen
3715	Exponent Relaxation of Polynomial Zonotopes and Its Applications in Formal Neural Network Verification	Tobias Ladner; Matthias Althoff
3954	Provable Robustness against a Union of $L_0$ Adversarial Attacks	Zayd Hammoudeh; Daniel Lowd
4159	Visual Adversarial Examples Jailbreak Aligned Large Language Models	Xiangyu Qi; Kaixuan Huang; Ashwinee Panda; Peter Henderson; Mengdi Wang; Prateek Mittal
4347	CASE: Exploiting Intra-class Compactness and Inter-class Separability of Feature Embeddings for Out-of-Distribution Detection	Shuai Feng; Pengsheng Jin; Chongjun Wang
4354	ImageCaptioner2: Image Captioner for Image Captioning Bias Amplification Assessment	Eslam Abdelrahman; Pengzhan Sun; Li Erran Li; Mohamed Elhoseiny
4980	I-CEE: Tailoring Explanations of Image Classification Models to User Expertise	Yao Rong; Peizhu Qian; Vaibhav Unhelkar; Enkelejda Kasneci
5103	Reward Certification for Policy Smoothed Reinforcement Learning	Ronghui Mu; Leandro Soriano Marcolino; Yanghao Zhang; Tianle Zhang; Xiaowei Huang; Wenjie Ruan
5369	Contrastive Credibility Propagation for Reliable Semi-supervised Learning	Brody Kutt; Pralay Ramteke; Xavier Mignot; Pamela Toman; Nandini Ramanan; Sujit Rokka Chhetri; Shan Huang; Min Du; William Hewlett
5414	Constrained Meta-Reinforcement Learning for Adaptable Safety Guarantee with Differentiable Convex Programming	Minjae Cho; Chuangchuang Sun
5447	Long-Term Safe Reinforcement Learning with Binary Feedback	Akifumi Wachi; Wataru Hashimoto; Kazumune Hashimoto
5479	DeepBern-Nets: Taming the Complexity of Certifying Neural Networks Using Bernstein Polynomial Activations and Precise Bound Propagation	Haitham Khedr; Yasser Shoukry
5530	A Huber Loss Minimization Approach to Byzantine Robust Federated Learning	Puning Zhao; Fei Yu; Zhiguo Wan

# AAAI-24: Safe, Robust, and Responsible AI (SRRAI)



5731	UMA: Facilitating Backdoor Scanning via Unlearning-Based Model Ablation	Yue Zhao; Congyi Li; Kai Chen
5768	EncryIP: A Practical Encryption-Based Framework for Model Intellectual Property Protection	Xin Mu; Yu Wang; Zhengan Huang; Junzuo Lai; Yehong Zhang; Hui Wang; Yue Yu
6077	Automatically Testing Functional Properties of Code Translation Models	Hasan Ferit Eniser; Valentin Wüstholtz; Maria Christakis
6305	From Hope to Safety: Unlearning Biases of Deep Models via Gradient Penalization in Latent Space	Maximilian Dreyer; Frederik Pahde; Christopher J. Anders; Wojciech Samek; Sebastian Lapuschkin
6422	Promoting Counterfactual Robustness through Diversity	Francesco Leofante; Nico Potyka
6541	$\pi$ -Light: Programmatic Interpretable Reinforcement Learning for Resource-Limited Traffic Signal Control	Yin Gu; Kai Zhang; Qi Liu; Weibo Gao; Longfei Li; Jun Zhou
6647	On the Concept Trustworthiness in Concept Bottleneck Models	Qihan Huang; Jie Song; Jingwen Hu; Haofei Zhang; Yong Wang; Mingli Song
6845	Quantile-Based Maximum Likelihood Training for Outlier Detection	Masoud Taghikhah; Nishant Kumar; Siniša Šegvić; Abouzar Eslami; Stefan Gumhold
7062	Combining Graph Transformers Based Multi-Label Active Learning and Informative Data Augmentation for Chest Xray Classification	Dwarikanath Mahapatra; Behzad Bozorgtabar; Zongyuan Ge; Mauricio Reyes; Jean-Philippe Thiran
7241	P2BPO: Permeable Penalty Barrier-Based Policy Optimization for Safe RL	Sumanta Dey; Pallab Dasgupta; Soumyajit Dey
7263	Feature Unlearning for Pre-trained GANs and VAEs	Saemi Moon; Seunghyuk Cho; Dongwoo Kim
7404	Balance Reward and Safety Optimization for Safe Reinforcement Learning: A Perspective of Gradient Manipulation	Shangding Gu; Bilgehan Sel; Yuhao Ding; Lu Wang; Qingwei Lin; Ming Jin; Alois Knoll
7418	LR-XFL: Logical Reasoning-Based Explainable Federated Learning	Yanci Zhang; Han Yu
7427	Towards Large Certified Radius in Randomized Smoothing Using Quasiconcave Optimization	Bo-Han Kung; Shang-Tse Chen
7514	I Prefer Not to Say: Protecting User Consent in Models with Optional Personal Data	Tobias Leemann; Martin Pawelczyk; Christian Eberle; Gjergji Kasneci
7575	Enumerating Safe Regions in Deep Neural Networks with Provable Probabilistic Guarantees	Luca Marzari; Davide Corsi; Enrico Marchesini; Alessandro Farinelli; Ferdinando Cicalese
7664	Responsible Bandit Learning via Privacy-Protected Mean-Volatility Utility	Shanshan Zhao; Wenhai Cui; Bei Jiang; Linglong Kong; Xiaodong Yan
7936	Efficient Toxic Content Detection by Bootstrapping and Distilling Large Language Models	Jiang Zhang; Qiong Wu; Yiming Xu; Cheng Cao; Zheng Du; Konstantinos Psounis
7991	Handling Long and Richly Constrained Tasks through Constrained Hierarchical Reinforcement Learning	Yuxiao Lu; Arunesh Sinha; Pradeep Varakantham
8061	Dissenting Explanations: Leveraging Disagreement to Reduce Model Overreliance	Omer Reingold; Judy Hanwen Shen; Aditi Talati
8109	Stronger and Transferable Node Injection Attacks	Samyak Jain; Tanima Dutta
8248	Representation-Based Robustness in Goal-Conditioned Reinforcement Learning	Xiangyu Yin; Sihao Wu; Jiayu Liu; Meng Fang; Xingyu Zhao; Xiaowei Huang; Wenjie Ruan
8287	Analysis of Differentially Private Synthetic Data: A Measurement Error Approach	Yangdi Jiang; Yi Liu; Xiaodong Yan; Anne-Sophie Charest; Linglong Kong; Bei Jiang
8418	Towards Efficient Verification of Quantized Neural Networks	Pei Huang; Haoze Wu; Yuting Yang; Ieva Daukantas; Min Wu; Yedi Zhang; Clark Barrett

# AAAI-24: Safe, Robust, and Responsible AI (SRRAI)



8555	Quilt: Robust Data Segment Selection against Concept Drifts	Minsu Kim; Seong-Hyeon Hwang; Steven Euijong Whang
8658	Understanding Likelihood of Normalizing Flow and Image Complexity through the Lens of Out-of-Distribution Detection	Genki Osada; Tsubasa Takahashi; Takashi Nishide
8677	Byzantine-Robust Decentralized Learning via Remove-then-Clip Aggregation	Caiyi Yang; Javad Ghaderi
9040	PointCVaR: Risk-Optimized Outlier Removal for Robust 3D Point Cloud Classification	Xinke Li; Junchi Lu; Henghui Ding; Changsheng Sun; Joey Tianyi Zhou; Yeow Meng Chee
9437	Generating Diagnostic and Actionable Explanations for Fair Graph Neural Networks	Zhenzhong Wang; Qingyuan Zeng; Wanyu Lin; Min Jiang; Kay Chen Tan
9612	Rethinking the Development of Large Language Models from the Causal Perspective: A Legal Text Prediction Case Study	Haotian Chen; Lingwei Zhang; Yiran Liu; Yang Yu
9912	Risk-Aware Continuous Control with Neural Contextual Bandits	Jose A. Ayala-Romero; Andres Garcia-Saavedra; Xavier Costa-Perez
9975	Assume-Guarantee Reinforcement Learning	Milad Kazemi; Mateo Perez; Fabio Somenzi; Sadegh Soudjani; Ashutosh Trivedi; Alvaro Velasquez
10183	Coevolutionary Algorithm for Building Robust Decision Trees under Minimax Regret	Adam Żychowski; Andrew Perrault; Jacek Mańdziuk
10629	GaLileo: General Linear Relaxation Framework for Tightening Robustness Certification of Transformers	Yunruo Zhang; Lujia Shen; Shanqing Guo; Shouling Ji
10651	Divide-and-Aggregate Learning for Evaluating Performance on Unlabeled Data	Shuyu Miao; Jian Liu; Lin Zheng; Hong Jin
10738	Robust Uncertainty Quantification Using Conformalised Monte Carlo Prediction	Daniel Bethell; Simos Gerasimou; Radu Calinescu
10756	Closing the Gap: Achieving Better Accuracy-Robustness Tradeoffs against Query-Based Attacks	Pascal Zimmer; Sébastien Andreina; Giorgia Azzurra Marson; Ghassan Karame
10916	Enhancing Off-Policy Constrained Reinforcement Learning through Adaptive Ensemble C Estimation	Hengrui Zhang; Youfang Lin; Shuo Shen; Sheng Han; Kai Lv
10939	Robust Stochastic Graph Generator for Counterfactual Explanations	Mario Alfonso Prado-Romero; Bardh Prenkaj; Giovanni Stilo
11084	Adversarial Initialization with Universal Adversarial Perturbation: A New Approach to Fast Adversarial Training	Chao Pan; Qing Li; Xin Yao
11313	Safe Reinforcement Learning with Instantaneous Constraints: The Role of Aggressive Exploration	Honghao Wei; Xin Liu; Lei Ying
11483	Safeguarded Progress in Reinforcement Learning: Safe Bayesian Exploration for Control Policy Synthesis	Rohan Mitta; Hosein Hasanbeig; Jun Wang; Daniel Kroening; Yiannis Kantaros; Alessandro Abate
11524	Solving Non-rectangular Reward-Robust MDPs via Frequency Regularization	Uri Gadot; Esther Derman; Navdeep Kumar; Maxence Mohamed Elfatihi; Kfir Levy; Shie Mannor
11580	A Simple and Yet Fairly Effective Defense for Graph Neural Networks	Sofiane Ennadir; Yassine Abbahaddou; Johannes F. Lutzeyer; Michalis Vazirgiannis; Henrik Bostrom
11751	Hypothesis Testing for Class-Conditional Noise Using Local Maximum Likelihood	Weisong Yang; Rafael Poyiadzi; Niall Twomey; Raul Santos-Rodriguez
11922	Neural Closure Certificates	Alireza Nadali; Vishnu Murali; Ashutosh Trivedi; Majid Zamani
11952	A PAC Learning Algorithm for LTL and Omega-Regular Objectives in MDPs	Mateo Perez; Fabio Somenzi; Ashutosh Trivedi

# AAAI-24: Safe, Robust, and Responsible AI (SRRAI)



11978	Towards Fairer Centroids in K-means Clustering	Stanley Simoes; Deepak P; Muiris MacCarthaigh
12016	Stability Analysis of Switched Linear Systems with Neural Lyapunov Functions	Virginie Debauche; Alec Edwards; Raphaël M. Jungers; Alessandro Abate
12040	AdvST: Revisiting Data Augmentations for Single Domain Generalization	Guangtao Zheng; Mengdi Huai; Aidong Zhang
12125	Omega-Regular Decision Processes	Ernst Moritz Hahn; Mateo Perez; Sven Schewe; Fabio Somenzi; Ashutosh Trivedi; Dominik Wojtczak
12329	SentinelLMs: Encrypted Input Adaptation and Fine-Tuning of Language Models for Private and Secure Inference	Abhijit Mishra; Mingda Li; Soham Deo
12398	Providing Fair Recourse over Plausible Groups	Jayanth Yetukuri; Ian Hardy; Yevgeniy Vorobeychik; Berk Ustun; Yang Liu
12441	On the Importance of Application-Grounded Experimental Design for Evaluating Explainable ML Methods	Kasun Amarasinghe; Kit T. Rodolfa; Sérgio Jesus; Valerie Chen; Vladimir Balayan; Pedro Saleiro; Pedro Bizarro; Ameet Talwalkar; Rayid Ghani
12565	Learning Fair Policies for Multi-Stage Selection Problems from Observational Data	Zhuangzhuang Jia; Grani A. Hanasusanto; Phebe Vayanos; Weijun Xie
12790	Chasing Fairness in Graphs: A GNN Architecture Perspective	Zhimeng Jiang; Xiaotian Han; Chao Fan; Zirui Liu; Na Zou; Ali Mostafavi; Xia Hu
12862	Find the Lady: Permutation and Re-synchronization of Deep Neural Networks	Carl De Sousa Trias; Mihai Petru Mitrea; Attilio Fiandrotti; Marco Cagnazzo; Sumanta Chaudhuri; Enzo Tartaglione
13175	The Evidence Contraction Issue in Deep Evidential Regression: Discussion and Solution	Yuefei Wu; Bin Shi; Bo Dong; Qinghua Zheng; Hua Wei
13195	Robustness Verification of Multi-Class Tree Ensembles	Laurens Devos; Lorenzo Cascioli; Jesse Davis
13267	Beyond Traditional Threats: A Persistent Backdoor Attack on Federated Learning	Tao Liu; Yuhang Zhang; Zhu Feng; Zhiqin Yang; Chen Xu; Dapeng Man; Wu Yang
13408	Robust Active Measuring under Model Uncertainty	Merlijn Krale; Thiago D. Simão; Jana Tumova; Nils Jansen
13567	OUTFOX: LLM-Generated Essay Detection Through In-Context Learning with Adversarially Generated Examples	Ryuto Koike; Masahiro Kaneko; Naoaki Okazaki
13647	All but One: Surgical Erasing with Model Preservation in Text-to-Image Diffusion Models	SeungHoo Hong; Juhun Lee; Simon S. Woo
13716	Human-Guided Moral Decision Making in Text-Based Games	Zijing Shi; Meng Fang; Ling Chen; Yali Du; Jun Wang
13752	DataElixir: Purifying Poisoned Dataset to Mitigate Backdoor Attacks via Diffusion Models	Jiachen Zhou; Peizhuo Lv; Yibing Lan; Guozhu Meng; Kai Chen; Hualong Ma
13760	Layer Attack Unlearning: Fast and Accurate Machine Unlearning via Layer Level Attack and Knowledge Distillation	Hyunjune Kim; Sangyong Lee; Simon S. Woo