Universiteit Utrecht

BNAIC / BeneLearn 2024

The venue is Jaarbeursplein 6, 3521 AL Utrecht. (Download the map here)

Day	Time	Type		Location
Monday 18 November	08:45 – 9:15	**Welcome & Registration**		TransitZone
	09:15 – 9:30	**Opening**		Progress
	09:30 – 10:30	**Invited Talk-Daniel Oberski**		Progress
	10:30 – 11:15	**Posters session 1 + Coffee**		TransitZone
	11:15 – 12:00 (Parallel sessions)	**KRR**	• Revising Beliefs and Intentions in Stochastic Environments	Progress
			• Efficiently grounding FOL using bit vectors	
			• Explaining Reasoning Results for OWL Ontologies with EVEE	
	11:15 – 12:00 (Parallel sessions)	**ORTEC**	• Optimization as a Lifesaver: by Joaquim Gromicho, Analytics for a Better World Institute	Expedition
	11:15 – 12:00 (Parallel sessions)	**Fairness in AI**	• Challenges in Algorithmic Fairness when Using Multi-Party Computation Models	Quest
			• From Laws to Algorithms: Detecting Unfairness in Machine Learning Models	
			• High stakes for LLMs: Analysis of Bias in BERT-based Recommender Systems	
	12:00 – 13:00	**Lunch**		TransitZone
		BNVKI general assembly		Progress
	13:00 – 14:30 (Parallel sessions)	**Deep Learning**	• Empirical Capacity Model for Self-Attention Neural Networks	Progress
			• REPROT: Explaining the Predictions of Complex Deep Learning	
			• Optimizing event-based neural networks on digital neuromorphic architecture: a comprehensive design space exploration	
			• Survey of Automated Methods for Nonverbal Behavior Analysis	
			• Spatiotemporal Covariance Neural Networks	
			• Bringing the RT-1-X Foundation Model to a SCARA robot	
			• Introduction to the session & the session theme	Expedition

Monday 18 November	**13:00 – 14:30** (Parallel sessions)	**Impact EWUU Alliance 1**	• Reducing Administrative Burden in Healthcare with Ontological Conversation Interpretation based on Generative AI	
			• Navigating the future of robotic-assisted thoracic surgery: *"XR and AI as precision instruments"*	
			• Demo of robotic-assisted thoracic surgery	
	13:00 – 14:15 (Parallel sessions)	**RL**	• Trustworthy and Explainable Offline Reinforcement Learning by Inferring a Discrete-State Discrete-Action MDP from a Continous-State Continuous-Action dataset	Quest
			• Human-readable programs as the actor of a Reinforcement Learning agent using critic-moderated evolution	
			• SimuDICE: Offline Policy Optimization Through World Model Updates and DICE Estimation	
			• Real-time Optimization of Industrial Processes using Deep Reinforcement Learning	
			• Learning Reward Structure with Subtasks in Reinforcement Learning	
	14:30 – 15:15	**Posters session 2 + Coffee**		TransitZone
		Demos	• ChatIDP: An Interactive Chatbot for IDP Knowledge Bases	
			• CATMA: Conformance Analysis Tool for Microservice Applications	
	15:15 – 16:15 (Parallel sessions)	**KRR**	• Backpropagation in Fuzzy Cognitive Map Model applied on classification problems	Progress
			• Replanning in Advance for Instant Delay Recovery in Multi-Agent Applications: Rerouting Trains in a Railway Hub	
			• A Fortiori Case-Based Reasoning: From Theory to Data	
			• Ontology Text Alignment: Aligning Textual Content to Terminological Axioms	
	15:15 – 16:30 (Parallel sessions)	**Impact EWUU Alliance 2**	• How real-life use and collaboration change research questions and directions	Expedition
			• Remote patient monitoring with wearables	

Monday 18 November			• Towards automated intake measurements: innovating nutrition through AI	
	15:15 – 16:30 (Parallel sessions)	**RL**	• The Wasserstein Believer: Learning Belief Updates for Partially Observable Environments through Reliable Latent Space Models	Quest
			• Guideline-informed reinforcement learning for mechanical ventilation in critical care	
			• Maximally Permissive Reward Machines	
			• Robustifying RL Agents for Safe Transfer through Action Disturbances	
			• Reinforcement Learning of Action Sequences in Table Football	
	16:45 – 17:45 (Parallel sessions)	**Interactive AI**	• Assessing the HI-ness of Virtual Heritage applications with Knowledge Engineering	Progress
			• An Encore Abstract: Agent-based Social Skills Training Systems: The ARTES Architecture	
			• A Preliminary Analysis on Self and Peer Evaluation of Personality Models for Recommender Systems	
			• * Emotion Contagion in Avatar-Mediated Group Interactions * Empirical Validation of an Agent-Based Model of Emotion Contagion	
	16:45 – 17:45 (Parallel sessions)	**NLP**	• The Smoking Gun: Unveiling GPT-4's Memorisation of Polish Texts and Implications for Copyright Infringement	Expedition
			• Generative AI-Based Virtual Assistant using Retrieval-Augmented Generation: An evaluation study for bachelor projects	
			• Generative AI for Research Data Processing: Lessons Learnt From Three Use Cases	
			• Morality is Non-Binary: Building a Pluralist Moral Sentence Embedding Space using Contrastive Learning	
		RL	• Pure-Past Action Masking	Quest

Monday 18 November	16:45 – 17:45 (Parallel sessions)		• Benchmarking Deep Reinforcement Learning for Battery Dispatch Optimisation	
			• To the Max: Reinventing Reward in Reinforcement Learning	
			• Monte-Carlo Search for Scheduling an Automated Guided Vehicle in a Blocking Job-Shop	
	17:45 – 19:00	**Reception**		TransitZone
	18:00 – 20:00	**PI / Faculty session**		Quest

Posters session 1- Monday morning (TransitZone)

Author(s)	Title
1. Işıl Baysal Erez, Jan Flokstra, Mannes Poel, Maurice van Keulen	The Impact of Missing Data Imputation on Model Performance and Explainability
3. Pei-Yu Chen, Selene Baez Santamaria, Maaike H.T. de Boer, Floris de Hengst, Bart A. Kamphorst, Quirine Smit, Shihan Wang, and Johanna Wolf	Intelligent Support Systems for Lifestyle Change: Integrating Dialogue, Information Extraction, and Reasoning (Extended Abstract)
5. Martijn de Bruin	Integration of Large Language Models in the Public Sector
7. Ruben Cartuyvels, John Koslovsky and Marie-Francine Moens	Unsupervised Induction of Harmonic Syntax
9. Renske de Wit, Carlos Manuel Garcia Fernandez, Soufyan Lakbir, Remond Fijneman and Sanne Abeln	Learning associations between gene defects and structural variant signatures in colorectal cancer
11. Catalin-Viorel Dinu	Reinforcement learning for Quantum Tiq-Taq-Toe
13. Adem Kaya	Caption-Augmented Multimodal Classification of Hateful Memes
15. Ilyas Lemmens	Evaluation of Anomaly Detection Methods in Time Series Using Instance Space Analysis
17. Niek van de Pas, Ayoub Bagheri, Willy Sier	Contextualizing Personality: Insights from Anthropology to Advance Personality Detection
19. Mana Douma, Emma Beauxis-Aussalet	Modelling Heteroscedasticity for Fair Regression using Polynomial Models

21. Stijn Verdenius, Andrea Zerio and Roy L.M. Wang	Learning Cold-start Time Series and Product-Image Joint Embeddings
23. Reda El Hail, Peter Karsmakers, Pouya Mehrjouseresht, Oluwatosin John Babarinde, Dominique Schreurs	Radar Based Human Activity Recognition: From Classification to Detection
25. Gellert Toth, Johan Kwisthout	Reducing required randomness for parallel Gibbs sampling
27. Max Verbinnen, Sander Verwimp	Empirical Hardness Analysis of MaxSAT
29. Lieke van den Biggelaar	Characterizing Atrial Fibrillation During and After Cardiac Surgery: An Exceptional Model Mining Approach on ECG Morphology Abnormalities
31. Hadi Mohammadi, Mahdieh Rahmati, Tina Shahedi	Novel Approaches in Financial Fraud Detection: Hybrid Machine Learning and Uncertainty-Based Deep Learning
33. Amitai Kamp	An Adaptive Spelling AI System for Personalized Dutch Spelling Education
35. Andrej Hulák, Vincenzo Lipardi, Domenica Dibenedetto, Kurt Driessens	Quantum Error Mitigation with Deep Learning and Sequence Models
37. Leah van Oorschot, Dimitris Michailidis, Shayla Jansen, Niek Ijzerman, Diederik Roijers	Where (Not) to Cross the Street
39. Rienk Fidder	Classification and Segmentation of Photovoltaic and Solar Thermal Systems from Aerial Imagery
41. Maximilian Rau	Evaluating the Effectiveness, Generalizability, and Explainability of Video Swin Transformers on Automated Pain Detection
43. Sylvia Kerkhove	A Transition System for Causality and Strategic Responsibility
45. Juri Morisse, Ioannis Koutalios, Rico Landman, Thomas Moerland	Reinforcement Learning for Sensorless Astronomical Imaging
47. Dominique Weltevreden	Using active learning to design the optimal lab experiments needed to improve antibody-antigen binding prediction
49. Federico Newton, Luis A. Leiva	Similarity Measures for Music Retrieval

51. Puck Kuijpers	Creating and Evaluating Animal Camouflage Patterns with Generative Adversarial Networks
53. Amirhossein Jazayeri, Mandani Ntekouli, Gerasimos Spanakis	Clustering and Co-Clustering of Multivariate Time-Series Based on Complex Networks
55. Haoyuan Li, Mathias Funk, Nezihe Merve Gürel and Aaqib Saeed	Collaboratively Learning Federated Models from Noisy Decentralized Data
57. Casper Verhoeve, Marcos L. P. Bueno and Casper Reijnen	Explaining Bayesian networks: a use case in endometrial cancer
59. Francisco N. F. Q. Simoes, Mehdi Dastani and Thijs van Ommen	Causal Entropy and Information Gain for Measuring Causal Control
61. Taewoon Kim, Vincent François-Lavet and Michael Cochez	HumemAI: A Machine With Human-Like Memory Systems
63. Abdo Abouelrous, Laurens Bliek, Adriana Gabor, Yaoxin Wu and Yingqian Zhang	Reinforcement Learning for Pricing Problem Optimization in Column Generation
65. Dea Gogishvili, Emmanuel Minois-Genin, Jan van Eck and Sanne Abeln	PatchProt: Hydrophobic patch prediction using protein foundation models
67. Juan Diego Cardenas-Cartagena, Massimiliano Falzari, Marco Zullich and Matthia Sabatelli	Upside-Down Reinforcement Learning for More Interpretable Optimal Control
69. Calarina Muslimani, Bram Grooten, Deepak Mamillapalli, Mykola Pechenizkiy, Decebal Mocanu and Matthew Taylor	Dynamic Sparsity for Robust Preference-Based Reinforcement Learning
71. Karol Wapniarski and Paweł Łupkowski	Rational or emotional? Alan Turing's "Heads in the Sand" Objection and the discussion of Autonomous Vehicles
73. Daniël Vos and Sicco Verwer	Optimizing Interpretable Decision Tree Policies for Reinforcement Learning
75. Benjamin Cornejo Costas, Shiva Nadi Najafabadi, Raoul Schram and Maarten Schermer	Alternative methods to measure breakthrough innovations: the case of historical patents

Posters session 2- Monday Afternoon (TransitZone)

Author(s)	Title
2. Nima Motamed, Natasha Alechina, Mehdi Dastani, Dragan Doder	Revising Beliefs and Intentions in Stochastic Environments

4. Lucas Van Laer, Simon Vandevelde, and Joost Vennekens	Efficiently grounding FOL using bit vectors
8. Aki Härmä, Marcin Pietrasik, Anna Wilbik	Empirical Capacity Model for Self-Attention Neural Networks
10. Leonardo Concepción, Marilyn Bello, Gonzalo Nápoles, Rafael Bello, Pablo Mesejo, Óscar Cordón	REPROT: Explaining the Predictions of Complex Deep Learning Architectures for Object Detection Through Reducts of an Image
12. Yingfu Xu, Kevin Shidqi, Gert-Jan van Schaik, Refik Bilgic, Alexandra Dobrita, Shenqi Wang, Roy Meijer, Prithvish Nembhani, Cina Arjmand, Pietro Martinello, Anteneh Gebregiorgis, Said Hamdioui, Paul Detterer, Stefano Traferro, Mario Konijnenburg, Kanishkan Vadivel, Manolis Sifalakis, Guangzhi Tang and Amirreza Yousefzadeh	Optimizing Event-Based Neural Networks on Digital Neuromorphic Architecture: A Comprehensive Design Space Exploration
14. Berfu Karaca, Albert Ali Salah, Jaap Denissen, Ronald Poppe, Sonja de Zwarte	Survey of Automated Methods for Nonverbal Behavior Analysis in Parent-Child Interactions
16. Andrea Cavallo, Mohammad Sabbagh, Elvin Isufi	Spatiotemporal Covariance Neural Networks
18. Jonathan Salzer, Arnoud Visser	Bringing the RT-1-X Foundation Model to a SCARA robot
20. Manuel Quesada, Leonardo Concepción, Koen Vanhoof	Backpropagation in Fuzzy Cognitive Map Model Applied on Classification Problems
22. Issa Hanou, Devin Wild Thomas, Wheeler Ruml, Mathijs de Weerdt	Replanning in Advance for Instant Delay Recovery in Multi-Agent Applications: Rerouting Trains in a Railway Hub
24. Delaram Javdani Rikhtehgar, Ilaria Tiddi, Shenghui Wang, Stefan Schlobach, Dirk Heylen	Assessing the HI-ness of Virtual Heritage Applications with Knowledge Engineering
26. Mohammed Al Owayyed, Myrthe Tielman, Arno Hartholt, Marcus Specht, Willem-Paul Brinkman	An Encore Abstract: Agent-based Social Skills Training Systems: The ARTES Architecture
28. Francesco Barile, Federico Cau, Nava Tintarev	A Preliminary Analysis on Self and Peer Evaluation of Personality Models for Recommender Systems
30. Colette Wibaut, Marie Beth van Egmond, Vincent Dunning	Challenges in Algorithmic Fairness when using Multi-Party Computation Models
32. Tibé Iritie, Daphne Lenders	From Laws to Algorithms: Detecting Unfairness in Machine Learning Models

34. Nisse Degelin, Pieter Delobelle, Kristen Scott, Bettina Berendt	High stakes for LLMs: Analysis of Bias in BERT-based Recommender Systems
36. Denis Steckelmacher, Ann Nowé	Trustworthy and Explainable Offline Reinforcement Learning by Inferring a Discrete-State Discrete-Action MDP from a Continous-State Continuous-Action dataset
38. Senne Deproost, Denis Steckelmacher, Ann Nowé	Human-readable programs as the actor of a Reinforcement Learning agent using critic-moderated evolution
40. Catalin Brita, Stephan Bongers, Frans A. Oliehoek	SimuDICE: Offline Policy Optimization Through World Model Updates and DICE Estimation
42. Nitin Singh, Jasper Stolte, Stanislav Jaso, Bei Li, Reinier van de Pol, Christian Michler	Real-time Optimization of Industrial Processes using Deep Reinforcement Learning
42. Shuai Han, Mehdi Dastani, Shihan Wang	Learning Reward Structure with Subtasks in Reinforcement Learning
46. Florent Delgrange, Raphael Avalos, Ann Nowe, Guillermo Perez, Diederik M. Roijers	The Wasserstein Believer: Learning Belief Updates for Partially Observable Environments through Reliable Latent Space Models Extended Abstract
48. Floris den Hengst, Martijn Otten, Paul Elbers, Frank van Harmelen, Vincent François-Lavet, Mark Hoogendoorn	Guideline-informed reinforcement learning for mechanical ventilation in critical care (Extended Abstract)
50. Giovanni Varricchione, Natasha Alechina, Mehdi Dastani, Brian Logan	Maximally Permissive Reward Machines
52. Markel Zubia, Thiago Simão, Nils Jansen	Robustifying RL Agents for Safe Transfer through Action Disturbances
54. Jonathan Croenen, Jens Bürger, Wannes Meert	Reinforcement Learning of Action Sequences in Table Football
56. Giovanni Varricchione, Natasha Alechina, Giuseppe De Giacomo, Mehdi Dastani, Brian Logan, Giuseppe Perelli	Pure-Past Action Masking
58. Grigorii Veviurko, Wendelin Böhmer, Mathijs de Weerdt	To the Max: Reinventing Reward in Reinforcement Learning

60. Eduard von Bothmer, Matúš Mihalák, and Mark H. M. Winands	Monte-Carlo Search for Scheduling an Automated Guided Vehicle in a Blocking Job-Shop
62. Kai He, Erwin Bakker and Michael Lew	Attention-guided Feature Pyramid Network for few-shot learning
64. Lara Thorissen, Alexandra Matz, Andreas Valentin and Martin Hofmann	Application of Creativity and Collaboration Software for an AI-Supported Analysis of User Research Insights
66. Jesse van Remmerden, Zaharah Bukhsh and Yingqian Zhang	Offline Reinforcement Learning for Learning to Dispatch for Job Shop Scheduling
68. Dominique Weltevreden, Jalmar Teeuw and Hilleke Hulshoff Poll	Using neural networks in polygenic risk score calculation
70. Ivan Knunyants, Maryam Tavakol, Manolis Sifalakis, Yingfu Xu, Amirreza Yousefzadeh and Guangzhi Tang	Explore Activation Sparsity in Recurrent LLMs for Energy-Efficient Neuromorphic Computing
72. Kristina Gogoladze, Natasha Alechina, Zhaoyang Jacopo Hu, Haozheng Xu, Romy van Jaarsveld and Jelle P. Ruurda	Monitoring robot-assisted surgery using kinematics
74. Pu Wang and Hugo Van Hamme	Primal-OWSM: Speech Foundation Model with Parameter-efficient Primal Attention for Low-resource Dutch Speech Recognition
76. Agus Hartoyo, Dominika Ciupek, Maciej Malawski and Alessandro Crimi	Data reconstruction from machine learning models via inverse estimation and Bayesian inference
78. Murad Bozik, Suzan Verberne and Joost Broekens	VALL-E Revisited: A Replication Study Exploring Efficient Text-to-Speech Model Training with Limited Resources
80. Joanna Budzik	The Smoking Gun: Unveiling GPT-4's memorisation of Polish Texts and Implications for Copyright Infringement
82. Alexander G. Padula, Dennis J.N.J. Soemers	Exploring RL-based LLM Training for Formal Language Tasks with Programmed Rewards
84. Jeongwoo Park, Enrico Liscio, Pradeep Murukannaiah	Morality is Non-Binary: Building a Pluralist Moral Sentence Embedding Space using Contrastive Learning
86. Modhurita Mitra, Martine de Vos, Nicola Cortinovis, Dawa Ometto	Generative AI for Research Data Processing: Lessons Learnt from Three Use Cases

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Day	Time	Type		Location
Tuesday 19 November	09:00 – 10:00	EurAI session	• Please check the website	Progress
	10:00 – 10:45	Posters session 3 + Coffee		TransitZone
	10:45 – 12:00 (Parallel sessions)	NLP	• PATCH! Psychometrics-AssisTed benCHmarking of Larg Language Models: A Case Study of Proficiency in 8th Grade Mathematics	Progress
			• InstaSynth: Opportunities and Challenges in Generating Synthetic Instagram Data with chatGPT for Sponsored Content Detection	
			• Improving Stance Detection by Leveraging Measurement Knowledge from Social Sciences: A Case Study of Dutch Political Tweets and Traditional Gender Role Division	
			• Examining Iconicity Information in Semantic and Phonetic Word Embeddings	
			• Exploring RL-based LLM Training for Formal Language Tasks with Programmed Rewards	
	10:45 – 12:00 (Parallel sessions)	DL	• Enhancing Cross-Modal Medical Image Segmentation through Compositionality	Expedition
			• Generating MNAR Missingness in Image Data, with Additional Evaluation of MisGAN	
			• Flexible Counterfactual Explanations with Generative Models	
			• Generating Artificial PET Scans from Low Dose CT Scans with an Adapted Dual Diffusion Implicit Bridges (DDIBs) model	
			• Improving Perception Metrics in Image Denoising by Using a Diffusion-Like Process atop a UNet Model	
	10:45 – 11:30 (Parallel sessions)	Transfer & online learning	• Towards a General Transfer Approach for Policy-Value Networks	Quest
			• Enhanced Boosting-based Transfer Learning for Modeling Ecological Momentary Assessment Data	

Tuesday 19 November			• Learning From Scenarios for Repairable Stochastic Scheduling	
	12:00 – 13:00	**Lunch**		TransitZone
		KION lunch meeting		Expedition
	13:00 – 14:30 (Parallel sessions)	**Evolutionary Computing**	• Solving the Casting problem using Column Generation; better results with 100 variables instead of 1 billion	Progress
			• Estimating Weights of Reasons Using Metaheuristics: A Hybrid Approach to Machine Ethics	
			• Procedurally Generating Natural-Looking Villages in Minecraft with Ant Colony Optimization Algorithms	
			• Learning Crossover Operators in Genetic Algorithms: Application to the Capacitated Vehicle Routing Problem	
			• A hybrid local search algorithm for the Continuous Energy-Constrained Scheduling Problem	
	13:00 – 14:30 (Parallel sessions)	**Impact ICAI**	• Introduction to the session	Expedition
			• The Flow Must Go On: Handling Uncertainties in Biomanufacturing Scheduling	
			• Getting the priorities straight: A qualitative case study of the values driving AI adoption in healthcare	
			• Deep Learning for Resolution Enhancement of Quantitative MR Maps Using High-Resolution Weighted Images	
			• AI as a Fragile Ally: Exploring Human-AI Collaboration	
			• To What Extent Are LLMs Capable of Generating Substantial Reflections for Motivational Interviewing Counselling Chatbots? A Human Evaluation	
Tuesday 19			• Related Explanations in Formal Argumentation, an Empirical Study	

			• AI trustworthiness	
			• Closing Remarks	
	13:00 – 14:30 **(Parallel sessions)**	**RL**	• Mitigating double-dipping in behavior-agnostic RL	Quest
			• Counterexamples to approaches blending search and learning for problem-solving	
			• Exploring the Pareto front of multi-objective COVID-19 mitigation policies using reinforcement learning	
			• Variational Quantum Algorithms for Particle Track Reconstruction	
			• Ancestor-Based α-β Bounds for Monte-Carlo Tree Search	
			• A* Algorithms for Dec-POMDPs	
	14:30 – 15:15	**Posters session 4 + Coffee**		TransitZone
		Demos	• AI Helpdesk – a platform for reliable answers to questions from the general public about AI	
	15:15 – 16:30 **(Parallel sessions)**	**ML & Time Series**	• Efficiently Mining Frequent Representative Motifs in Large Collections of Time Series	Progress
			• Real-time prediction of Atrial Fibrillation using Meta-learning	
			• Feature engineering for classification: A bibliometric literature review	
			• Predicting adverse long-term neurocognitive outcomes after pediatric intensive care unit hospitalization	
			• Weather Data Imputation Using Graph-Based Low-Rank Matrix Completion with Variable Projection	
	15:15 – 16:15 **(Parallel sessions)**	**KRR**	• Quantum Theory in Knowledge Representation: A Novel Approach to Reasoning with a Quantum Model of Concepts	Expedition
Tuesday 10			• SAT-Based Enumeration Of Solutions To The Yang-Baxter Equation	

			• What To Do Next? A Comparative Study of Human and Rational Decision-Making	
			• ARN: Analogical Reasoning on Narratives	
	15:15 – 16:15 (Parallel sessions)	**Data & pattern mining**	• Analyzing the interplay between societal trends and socio-demographic variables with local pattern mining: Discovering exceptional trends in adolescent alcohol use in the Netherlands	Quest
			• Polar Encoding: A Simple Baseline Approach for Classification with Missing Values	
			• Necessary and Sufficient Conditions for Optimal Decision Trees using Dynamic Programmingv	
			• Optimizing the Magic Formula in Europe: Factors Driving Return, Risk and Risk-Adjusted Return	
	16:45 – 17:45	**FACT session**	• Five Key Phrases for Trustworthy AI	Progress
			• Sparse Artificial Neural Networks for Sustainable AI	
			• Between Hammer and Terminator	
	18:00 – 20:00	**Dinner**		TransitZone

Posters session 3- Tuesday Morning (TransitZone)

Author(s)	Title
1. Marta Freixo Lopes, Roy L.M. Wang, Stijn Verdenius	Bridging the Reality Gap with PICRL
3. Roos Bakker	Natural Language Processing for Knowledge Graph Extraction and Evaluation
5. Issa Hanou, Sebastijan Dumancic and Mathijs de Weerdt	Discovering Generalized Landmarks: Capturing Abstract Relations in Real-World Planning
7. Tina Mioch, Huib Aldewereld, Luciano Cavalcante Siebert, Stefan Leijnen and Mark A. Neerincx	Values for Responsible AI-Based Decision-Aid for Fire Services
9. Emmanuel C. Chukwu, Rianne M. Schouten, Monique Tabak and Mykola Pechenizkiy	Counterfactual Explanations with Domain Knowledge in Multivariate Time Series

11. Massimiliano Falzari and Matthia Sabatelli	Fisher-Guided Selective Forgetting (FGSF) For Deep Reinforcement Learning
13. Yasmine Akaichi and Jean-Marie Jacquet	Inductive Logic Programming for Complications Prediction from Medical Data
15. Chusi Xie, Muriel Hagenaars, Gerko Vink and Paul Boelen	Predicting Prolonged Grief Disorder Severity: A Machine Learning Approach to Prediction and Interpretation Using the MARBLES Archive
17. Marijn Schraagen and Hans Marien	Predicting and classifying stress-related human sensor data
19. Nikolaj Tollenaar	Multilabel text classification of police registrations for cyber- and digitized crime: a comparison of classical machine learning with deep learning
21. Jan van Eck and Sanne Abeln	Isolating a hand-crafted explanation for improved interpretability of biological foundation models
23. Abdallah Al-Janabi	Merging Expert Knowledge and Machine-Learning to Provide Personalised Just-In-Time Advice in an Osteo-Arthritis Self-Management Application
25. Marco Favier and Toon Calders	When Fairness Optimization Goes Wrong
27. Chaohui Guo and Michel Klein	Improving Long-Term Conversational Memory in LLMs with a Graph-Based Approach
29. Mohamad Hoteit, Richard van Dijk, Matthijs van Leeuwen and Tessa Verhoef	Decoding 3D Upper Limb Motion Using EEG and Motion Capture Integration: A Deep Learning Approach
31. Ceciel Pauls, Michel Klein, Judith Bosmans and Stef Bouwhuis	Objective or subjective employment precariousness? Comparing definitions to a topic model based on user-generated data
33. Twan Lieuw A Soe, Sietske Tacoma, Steven Haveman, Devran Alper and Stephan Nell	Streamlining Tender Submissions: An AI Approach
35. Onuralp Ulusoy, Aysu Ismayilova and Johan Jeuring	mAIchart: A Learning Analytics Tool for Primary School Educators

37. Gaby van Iersel, Jalmar Teeuw, Inge van Ooijen, Mireille Bekker, Manon Benders, Ruud van Sloun, Hilleke Hulshoff Pol and Sonja de Zwarte	Improving 3D US Fetal Brain Segmentation via Cross-Modality Label Transfer from MRI to US
39. Ceyhun Çelebi, Şehrigül Toksoy, Esra Süzen, Fatma Yardibi, Ebru Apaydın Doğan, Serdar Gündoğdu, Ömer Halil Çolak and Övünç Polat	Determination of Distinctive HRV Features of E-Sports Players Playing Exergames
41. Pu Wang and Hugo Van Hamme	Disentangle-Transformer: An Explainable End-to-End Automatic Speech Recognition Model with Speech Content-Context Separation Learning Based on Varying Temporal Resolutions
43. Florent Delgrange, Guy Avni, Anna Lukina, Christian Schilling, Ann Nowe and Guillermo Perez	Controller Synthesis from Deep Reinforcement Learning Policies
45. Lennert De Smet, Gabriele Venturato, Giuseppe Marra and Luc De Raedt	Neurosymbolic Reinforcement Learning With Sequential Guarantees
47. Florian Dammes van Leeuwen, Shubhayu Bhattacharyay, Alex Carriero, Ethan Jacob Moyer and Richard Moberg	Predicting ICP in patients with TBI: evaluation of a foundation model for time series
49. Jeroen Spaans and Jesse Heyninck	A Unifying Framework for Semiring-Based Constraint Logic Programming With Negation
51. Marybeth Defrance, Maarten Buyl, Guillaume Bied, Jefrey Lijffijt and Tijl De Bie	BiMi sheets for bias mitigation methods
53. Jimmy Mulder and Roelant Ossewaarde	Model Validation by Increasing Entropy in Datasets
55. Michaël Grauwde, Mark Neerincx and Olya Kudina	Conversational Agents for Value Reflection
57. Qixiang Fang, Daniel Oberski, Dong Nguyen	PATCH! Psychometrics-AssisTed benChmarking of Large Language Models: A Case Study of Proficiency in 8th Grade Mathematics
59. Jamie Wright	Examining Iconicity Information in Semantic and Phonetic Word Embeddings
61. Aniek Eijpe, Valentina Corbetta, Kalina Chupetlovska, Regina Beets-Tan, Wilson Silva	Enhancing Cross-Modal Medical Image Segmentation through Compositionality

63. Natasha T.J. van den Berg, Bram O. Broekgaarden, Dionysia P.A. Mahieu, Jolijn G.M.J. Martens, Jonas M.Niederle, Rianne Schouten and Wouter Duivesteijn	Generating MNAR Missingness in Image Data, with Additional Evaluation of MisGAN
65. Francesca Marogna, Martijn van Leeuwen, Fabian Hoitsma, Gorkem Saygili, Sharon Ong	Generating Artificial PET Scans from Low Dose CT Scans with an Adapted Dual Diffusion Implicit Bridges (DDIBs) Model
67. Pierre Gabriel Bibal Sobeaux	Improving Perception Metrics in Image Denoising by Using a Diffusion-Like Process atop a UNet Model
69. Caroline Magg, Hoel Kervadec and Clara I.Sánchez	Zero-shot capability of 2D SAM-family models for bone segmentation in CT scans

Posters session 4- Tuesday Afternoon (TransitZone)

Author(s)	Title
2. Jippe Hoogeveen, Marjan van den Akker, Han Hoogeveen	Solving the Casting problem using Column Generation; better results with 100 variables instead of 1 billion
4. Benoît Alcaraz, Aleks Knoks, David Streit	Estimating Weights of Reasons Using Metaheuristics: A Hybrid Approach to Machine Ethics
6. Tobias Deinböck, Chu-Hsuan Hsueh, Kokolo Ikeda	Procedurally Generating Natural-Looking Villages in Minecraft with Ant Colony Optimization Algorithms
8. Amaury Guichard, Quentin Cappart	Learning Crossover Operators in Genetic Algorithms: Application to the Capacitated Vehicle Routing Problem
10. Roel Brouwer, Marjan van den Akker, Han Hoogeveen	A Hybrid Local Search Algorithm for the Continuous Energy-Constrained Scheduling Problem
12. Ward Gauderlis, Geraint Wiggins	Quantum Theory in Knowledge Representation: A Novel Approach to Reasoning with a Quantum Model of Concepts
14. Daimy Van Caudenberg, Bart Bogaerts, Leandro Vendramin, Samuele Pollaci	SAT-Based Enumeration Of Solutions To The Yang-Baxter Equation
16. Bram Swaanen, and Tomas Klos	What To Do Next? A Comparative Study of Human and Rational Decision-Making
18. Zhivar Sourati, Filip Ilievski, Pia Sommerauer, Yifan Jiang	ARN: Analogical Reasoning on Narratives

20. Mandani Ntekouli, Gerasimos Spanakis, Lourens Waldorp, Anne Roefs	Enhanced Boosting-Based Transfer Learning for Modeling Ecological Momentary Assessment Data
22. Kim van den Houten, David Tax, Esteban Freydell, Mathijs de Weerdt	Learning from Scenarios for Repairable Stochastic Scheduling
24. Yaren Aslan, Stephan Bongers, Frans Oliehoek	Mitigating double-dipping in behavior-agnostic RL
26. Brieuc Pinon, Jean-Charles Delvenne, and Raphaël Jungers	Counterexamples to RL approaches blending search and learning for problem-solving
28. Vincenzo Lipardi, Xenofon Chiotopoulos, Jacco A. de Vries, Domenica Dibenedetto, Kurt Driessens, Marcel Merk, Mark H.M. Winands	Variational Quantum Algorithms for Particle Track Reconstruction
30. Tom Pepels, Mark Winands	Ancestor-Based α-β Bounds for Monte-Carlo Tree Search
32. Wietze Koops	A* Algorithms for Dec-POMDPs
34. Rianne M. Schouten, Gonneke W.J.M. Stevens, Saskia A.F.M. van Dorsselaer, Elisa L. Duinhof, Karin Monshouwer, Mykola Pecheniziky and Wouter Duivesteijn	Analyzing the interplay between societal trends and socio-demographic variables with local pattern mining: Discovering exceptional trends in adolescent alcohol use in the Netherlands
36. Oliver Urs Lenz, Daniel Peralta, Chris Cornelis	Polar Encoding: A Simple Baseline Approach for Classification with Missing Values
38. Jacobus G.M. van der Linden, Mathijs de Weerdt, Emir Demirović	Necessary and Sufficient Conditions for Optimal Decision Trees using Dynamic Programming
42. Fabio De Ponte	Grounding Words in Visual Perceptions: Experiments in Spoken Language Acquisition
44. Max van Duijn, Bram van Dijk, Tom Kouwenhoven, Werner de Valk, Marco Spruit, Peter van der Putten	Theory of Mind in Large Language Models: Examining Performance of 11 State-of-the-Art models vs. Children Aged 7-10 on Advanced Tests
46. Cascha van Wanrooij, Omendra Manhar, Jie Yang	Topic Modeling for Small Data using Generative LLMs
50. Tom McDonald, Calvin Tsay, Artur M. Schweidtmann, Neil Yorke-Smith	Mixed-Integer Optimisation of Graph Neural Networks for Computer-Aided Molecular Design (Article Abstract)
52 Isel Grau, Gonzalo Nápoles	Sparseness-Optimized Feature Importance
54. Oliver Urs Lenz, and Matthijs van Leeuwen	Directional anomaly detection

56. Noah Schutte, Krzysztof Postek, Neil Yorke-Smith	Robust Losses for Decision-Focused Learning
58. Pedro Ilídio, Ricardo Cerri, Celine Vens, Felipe Kenji Nakano	Deep forests with tree-embeddings and label imputation for weak-label learning
60. Yehor Kozyr, Weam Aridi, Neil Yorke-Smith	An Efficient Decremental Algorithm for Simple Temporal Networks
62. Johan Kwisthout	Subjective and temporal quality-of-life information in Bayesian networks
64. Veerle E. van den Hurk, Egon L. van den Broek, Marjan van den Akker, Erwin Abbink	Template and constraint-based models for the optimization of schedules, applied to Netherlands Railways (NS)' crew planning
66. Konstantin Sidorov, Gonçalo Correia, Mathijs De Weerdt, Emir Demirović	Paths, Proofs, and Perfection: Developing a Human-Interpretable Proof System for Constrained Shortest Paths
68. Marcin Pietrasik, Marek Reformat, Anna Wilbik	Non-Parametric Path Based Model for Taxonomy Induction in Knowledge Graphs
70. Dumitru Versebeniuc, Martijn Elands, Sara Falahatkar, Chiara Magrone, Mohammad Falah, Martijn Bousse and Aki Harma	Generative AI-based Virtual Assistant using Retrieval-Augmented Generation: An evaluation study for bachelor projects
72. Qixiang Fang, Anastasia Giachanou, Ayoub Bagheri	Improving Stance Detection by Leveraging Measurement Knowledge from Social Sciences: A Case Study of Dutch Political Tweets and Traditional Gender Role Division
74. Thales Bertaglia, Lily Heising, Rishabh Kaushal, Adriana Iamnitchi	InstaSynth: Opportunities and Challenges in Generating Synthetic Instagram Data with chatGPT for Sponsored Content Detection
76. Stijn Rotman, Boris Cule, Len Feremans	Efficiently Mining Frequent Representative Motifs in Large Collections of Time Series
78. Felipe Kenji Nakano, Karolijn Dulfer, Ilse Vanhorebeek, Pieter J. Wouters, Sascha Verbruggen, Koen Joosten, Fabian Grandas, Celine Vens, and Greet Van den Berghe	Predicting adverse long-term neurocognitive outcomes after pediatric intensive care unit hospitalization

Universiteit Utrecht

BNAIC / BeneLearn 2024

The venue is Jaarbeursplein 6, 3521 AL Utrecht. (Download the map here)

Day	Time	Type		Location
Wednesday 20 November	09:00 – 10:00	Invited talk-Nuria Oliver		Progress
	10:00 – 10:30	Coffee		TransitZone
	10:30 – 11:30 (Parallel sessions)	NLP	• Explicitly Representing Syntax Improves Sentence-to-layout Prediction of Unexpected Situations	Progress
			• Grounding Words in Visual Perceptions: Experiments in Spoken Language Acquisition	
			• Theory of Mind in Large Language Models: Examining Performance of 11 State-of-the-Art models vs. Children Aged 7-10 on Advanced Tests	
			• Topic Modeling for Small Data using Generative LLMs	
	10:30 – 12:00 (Parallel sessions)	Data & pattern mining	• Monotone Oblique Decision Trees	Expedition
			• Mixed-Integer Optimisation of Graph Neural Networks for Computer-Aided Molecular Design	
			• Sparseness-Optimized Feature Importance	
			• Directional anomaly detection	
			• Robust Losses for Decision-Focused Learning	
			• Deep forests with tree-embeddings and label imputation for weak-label learning	
	10:30 – 11:45 (Parallel sessions)	KRR	• An Efficient Decremental Algorithm for Simple Temporal Networks	Quest
			• Subjective and temporal quality-of-life information in Bayesian networks	
			• Template and constraint-based models for the optimization of schedules, applied to Netherlands Railways (NS)' crew planningv	
			• Paths, Proofs, and Perfection: Developing a Human-Interpretable Proof System for Constrained Shortest Paths	
			• Non-Parametric Path Based Model for Taxonomy Induction in Knowledge Graphs	
	12:00 – 12:30	Awards & Closing		Progress