

Friday, 25 April 2025

09:30 - 10:30		Registration					
11:00 - 13:00	Session 1: Technology-Enhanced Learning Chair: Vladimir Trajkovikj, PhD (Hall 1)		Session 2: Language Technologies and Knowledge-Driven Systems Chair: Riste Stojanov, PhD (Hall 2)		Workshop: ChatMED (Hall 3)		
	102	Mila Dodevska, Zivko Atanaskoski, Mile Jovanov, Emil Stankov and Petre Lameski	Exploring the Educational Potential of Virtual Reality and Mixed Reality: Immersive Learning, Student Engagement, and Knowledge Retention	46		Marija Stojcheva, Goran Petkovski and Igor Mishkovski	Automatic Speech Recognition for Swiss German: A Comparative Analysis of Whisper and Wav2Vec
	83	Nikola Kostadinov, Narcis Nacev, Ekaterina Cvetkova, Marko Karbevski, Marija Stankova Medarovska and Viktor Denkovski	Moodle-GPT Chatbot: An AI Moodle Integration for Collaborative Learning	23		Stefan Milev	Retrieval-Augmented Generation and Large Language Models: A Survey
	28	Maja Videnovik and Vladimir Trajkovik	Escape to Learn: Assessing the Role of Game-Based Learning in Cybersecurity Education	99		Cvetanka Nechevska and Ivan Kitanovski	Evaluating Speech-to-Text Models for Macedonian and English: A Comparative Study
	55	Elena Atanasoska and Riste Stojanov	Python for Mass Spectrometry: A Comprehensive Overview of Libraries for Data Processing and Analysis	37		Vesna Pop-Dimitrijoska Koteska, Ana Markovska, Andrej Petkovikj, Marija Maneva, Ema Pandilova, Pance Ribarski and Bojan Ilijoski	Performance Analysis of Open-Source Large Language Models: Accuracy, Efficiency, and Response Variability
	74	Zivko Atanaskoski, Zorica Karapancheva, Vesna Dimitrova and Riste Stojanov	Implementation of Non-Interactive Zero-Knowledge Proof Based Authentication Protocol for Student Authentication	63		Bojana Marojevikj and Riste Stojanov	Navigating the Data Space Landscape: Concepts, Applications, and Future Directions
	100	Petar Sekuloski and Dobrinka Sotirova	Leveraging Topological Data Analysis for Enhanced S&P 500 Price Forecasting	18		Daniilo Najkov and Riste Stojanov	Recipe Similarity Through Knowledge Graphs: A Survey
	66	Martin Dinev	Enhancing AI Education with a Custom Code Runner Template: A Solution for Fair Grading and Improved Feedback in Search-Based Problems	12		Darko Sasanski and Riste Stojanov	Food Data in the Semantic Web: A Review of Nutritional Resources, Knowledge Graphs, and Emerging Applications
13	Stevo Bozinovski and Vangel Bozinovski	Robotics, Electrical Engineering, and Tourism in Macedonia	32	Dimitar Pavlovski and Riste Stojanov	Bridging the Gap Between Natural Language and Semantic Web: A Text-to-SPARQL System		
13:00 - 14:00							
14:00 - 15:00							
15:00 - 15:10							
15:10 - 16:10							
16:10 - 16:30							
16:30 - 18:30		Session 3: AI for Health, Environment, and Human-Centered Intelligence Chair: Monika Simjanoska, PhD (Hall 1)				Automated Learning Techniques - panel discussion (Hall 3)	
27	Hana Hasanica	Chronic Kidney Disease Detection Using Mass Spectrometry Data: A Survey	19	Rilind Kaba, Fisnik Doko, Marting Djonov and Stojan Kitanov	A Custom Mocking Server for API Simulation: Design, and Implementation		
21	Dimitar Jovanovski and Petre Lameski	Deep learning for neural drive estimation using EMG Signals: A review of methods and applications	48	Marija Karajanova, Dimitar Kitanovski, Zorica Karapancheva, Aleksandar Stojmenski, Petre Lameski and Ivan Chorbev	Web-Based Platform for Enhancing Coordination in Technology Transfer		
10	Sara Gjorgjieva, Riste Stojanov and Marjan Gusev	Detection of Atrial Fibrillation: A Systematic Review and Meta-Analysis	64	Andrej Shekerov, Dimitar Mileski and Marjan Gusev	Time-Series HRV with CUDA		
34	Borjan Georgievski, Niki Ramancev and Marija Stankova Medarovska	Evaluating Large Language Models Potential in Mental Health Counseling: A Comparative Study Using the Therapy Empathy Scale	24	Evgenija Krajchevska and Vojdan Kjorveziroski	VulnerSec: A Flexible, Automated and Open-Source Cybersecurity Framework		
84	Mihail Gjorgjiev, Kostadin Mishev and Monika Simjanoska Misheva	Exploring Transformer Models for EMG Signal Classification: A Case Study in ALS Detection	78	Jovan Krajevski and Biljana Tojtovska Ribarski	Going NUTS with ADVI: Exploring various Bayesian inference techniques with Facebook Prophet		
20	Angela Mladenovska	Air Quality Classification using Machine Learning and Deep Learning Algorithms	82	Andrej Vuchkovikj, Sanja Apostolovikj, Nikola Kostadinov, Viktor Denkovski, Marija Stankova Medarovska and Goce Gavrilo	Raising awareness in protecting from RFID attacks		
71	Narcis Nacev, Nikola Kostadinov, Viktor Denkovski and Marija Stankova Medarovska	AI Incorporated Job Matching System for Creating Career Opportunities	85	Andrej Vuchkovikj, Viktor Danev, Viktor Denkovski and Bogdan Jeliskoski	Mitigating Malicious Spoofing and Sniffing Attacks Through a Portable Secure Router		
105	Tanja Pavleska and Vladimir Trajkovikj	Confidence in the Mirror, Doubt in the Crowd: Navigating Trust in the Age of AI	90	Simon Atanasovskij, Elissa Mollakuqe and Vesna Dimitrova	Game Theory to Cryptography by Incentivizing Secure Federated Learning in Cyber Contexts		
20:00							

Joint Workshop on Bilateral Collaborations between Macedonia and Austria: Advancements and Shared Experiences in Explainable AI in Robotics and AI-Driven Biological Discovery (Hall 4); Workshop: MKSafeNet (Hall 5)

Dinner (Live Band)

Saturday, 26 April 2025									
08:30 - 09:30	Registration								
09:30 - 11:30	Session 5: Machine Learning and Large Language Models Chair: Ivan Kitanovski, PhD (Hall 1)			Session 6: General Computing Chair: Biljana Stojkoska, PhD (Hall 2)					
	87	Zorica Karapancheva, Jovan Simonoski, Marjan Gusev and Dimitar Mileski	Ollama LLMs serverless deployment - Performance evaluation using LangChain	22	Dimitar Peshevski and Dimitar Trajanov	Graph-Based Approaches to Input-Output Analysis, Trade Flows, and Economic Complexity: A Literature Review			
	91	Agon Osmani and Riste Stojanov	A survey on intelligent agentic workflows	59	David Arsovski, Dimitar Trajanov and Marija Saveska	Interactive Recommendation System with Graph Neural Networks			
	43	Ivan Apostolovski, Martin Angelovski, Vladimir Radevski and Marija Stankova Medarovska	Large Language Models for Legal Reasoning in Low Resource Languages	25	Pance Cankovski, Slave Temkov, Aleksandar Nikov, Petre Lameski and Vladimir Trajkovik	Platform for Environmental Data Crowdsensing and Visualization			
	97	Mihail Trajkovikj, Marko Lazarevski, Anabela Bochvarova, Evgenij Anushev, Ilija Trajkovski and Georgina Mirceva	Hate Speech Detection on Social Media Using Transformer-Based Models: A BERT Approach	16	Adrijan Božnovski	Topologically Equivalent Binary Trees Regarding Binary Tree Roll			
	75	Natalija Arizankoska and Hristijan Gjoreski	Online Shoppers Purchasing Intention Prediction and Analysis Using Machine Learning	67	Valentin Cvetanovski, Ljubinka Sandjakoska and Rasim Sakoski	Computational Photography Assessment: A Framework for Image Quality and Composition Analysis			
	14	Marija Saveska and Dimitar Trajanov	Optimization of the race strategy in Formula 1	79	Armen Telkju and Dejan Gjorgievikj	Neural Radiance Fields (NeRFs) for Satellite Imagery: A literature review			
	44	Martina Jovanovikj and Hristijan Gjoreski	Bitcoin Price Prediction Using Classical Machine Learning and Deep Learning	15	Andrej Nankov and Vladimir Trajkovik	AI-Powered Pipeline for Video Generation from Large Texts			
	31	Atanasko Mitrev and Andrea Kulakov	End-to-End control of a F1Tenth vehicle	56	Teo Stojkovski, Evrosina Stojkoska, Marko Petrov, Ema Pandilova, Vlatko Spasev and Ivan Kitanovski	Overview of Foundation Models in Remote Sensing			
11:30 - 12:00	Coffee break								
12:00 - 13:00	Invited Speaker: Reiner Creutzburg - "IT Forensics – An Overview" (Hall 1)								
13:00 - 14:30	Lunch break								
14:30 - 16:30	Student Session 1 Chair: Ilinka Ivanoska, PhD (Hall 1)			Session 7: CyberMACS: Security, AI, Forensics Chair: Reiner Creutzburg, PhD (Hall 2)					
	45	Mite Mazgaliev, Bojan Iljoski and Zlatko Zafirovski	Quantitative Analysis of Tunnel Stability Using a Data-Driven Approach	42	Mahnour Jamil, Ivan Chorbev and Boban Joksimoski	AI Based Cyberbullying Detection - State of the Art			
	77	Darko Trajanov	A Multi-Agent System for Student Banking and Stock Market Analysis	57	Furkan Colhak, Hasan Coşkun, Tsafac Nkombong Ragne Cyrille, Tedi Hoxa, Mert Ilhan Erenel and Mehmet Nafiz Avtin	Accelerating IoT Intrusion Detection: Benchmarking GPU-Accelerated vs CPU-Based ML Libraries			
	58	Sara Trpchevikj and Petar Sekuloski	Analysis on features of Human Glaucoma using Human Glaucoma dataset	60	Isiaq Bolaji Ibrahim	Android Digital Forensics of Vulnerable Mobile Applications: Data Extraction and Analysis of Hardcoded Strings			
	80	Anastasija Tashkova, Stefan Ettimov, Bojan Ristov and Slobodan Kalajdziski	Comparative Analysis of Stroke Prediction Models Using Machine Learning	70	Klesida Gjana	AI-Driven Vulnerability Detection in Code: A State-of-the-Art Review with a Focus on CWE and Java Frameworks			
	52	Dina Poturovikj	EEG Time – Series Modeling to Analyze the Effect of Dopaminergic Medication on Tremor Intensity in Parkinson's Disease	73	Marija Taneska and Ikechukwu John Chukwu	Ciphertext-Only Attacks Using Large Language Models			
	53	Vasilija Jovchevska	Interpretable Deep Learning in Neurology: Grad-CAM and AI Models for Brain Disease Detection	89	Isiaq Bolaji Ibrahim	Digital Forensics in Cloud Computing Leveraging Google Cloud Forensics Utils			
	40	Ana Markovska and Bojan Iljoski	Data Preprocessing and Exploration of Developmental Disabilities Dataset	96	Kebal Prasad Bhandari	Behavioral Authentication: A Comprehensive Evaluation of Reliability in Contemporary Web Security			
	94	Djansel Bukovec, Blagoche Gjorgjoski, Kostadin Mishev and Monika Simjanoska Misheva	Large Language Models for Predictive Neurology: A Neurogenomic and Neurogenetic Perspective	98	Aldiyar Ismailov	Access Control Using Threshold Cryptography and Dynamic Policy Management			
16:30 - 17:00	Coffee break								
17:00 - 17:45	Invited Speaker: Stevo Lukic - "Human evaluation framework within the ChatMed project" (Hall 1)								
17:45 - 19:45	Student Session 2 Chair: Bojan Iljoski, PhD (Hall 1)			Student Session 3 Chair: Aleksandar Stojmenski, PhD (Hall 2)		Session 8: CyberMACS 2: Security, Privacy Chair: Ivan Chorbev, PhD (Hall 3)			
	65	Zoran Petrovski and Ana Madevska Bogdanova	Farm and Animal Intelligent Recommendation System - FAIRS	1	Kristijan Gjoshev and Biljana Risteska Stojkoska	Embedded device for efficient watering of agricultural land	95	Asem Mousa and Petre Lameski	Mapping the Landscape of Anonymous CTI Sharing
	61	Bozhan Todorov	A review of machine learning algorithms for forecasting solar energy production, electric load and electricity price	17	Marko Angelovski, Bojan Zivkovikj, Andon Angov, Viktor Denkovski and Marija Stankova Medarovska	Implementing Interactive Learning For Educational Involvement Via Algorithmic Game Design	51	Resul Bedi Gümüş and Boban Joksimoski	Web Tracking Technologies- current research analysis
	69	Bojan Ristov, Stefan Ettimov, Milena Trajanoska and Dimitar Trajanov	Ontology-Based Structuring and Analysis of North Macedonian Public Procurement Contracts	101	Gorica Miceva, Mile Jovanov, Emil Stankov and Zivko Atanasoski	Using the BBC Micro:bit in Educational Settings: Recommendations for N. Macedonia	81	Ikechukwu John Chukwu and Vesna Dimitrova	Software Implementations of Lightweight Ciphers: A Survey with Focus on ASCON
	50	Teodora Mladenovska, Martina Toshevskva and Sonja Gievska	Exploration into LLMs capabilities for question-answering over tabular data	88	Nevena Kimova and Ana Madevska Bogdanova	Combination of Kolb's Experiential Learning Cycle and Project-Based Learning in Data Science Education	92	Berfin Ebrar Atabey and Sasho Gramatikov	A Review of Cross-Layer Security Vulnerabilities in IoT Communication Protocols
	39	Ilija Bozoski and Sasho Gramatikov	AI-Driven Project Management : LLM-Powered Task Automation and Optimization	62	Dime Gjorgiev, Boris Manev and Sasho Gramatikov	Analysis and Comparison of Super-Resolution Models	93	Lydia Hanjugu Muigwa	Mitigating Cyber Threats from Social Media Data Exposure
	35	Marino Jakimoski and Ilinka Ivanoska	Hyperparameter Optimization and AutoML of a Simple CNN for Skin Lesion Classification	47	Viktor Najdovski and Verica Bakeva	Analysis of a Stochastic Predator-Prey Model for Detective-Criminal Dynamics	76	Helmi Hibatullah and Abdaal Khan Khattak	Network Segmentation and Isolation: Segmenting IoT networks to isolate critical systems from potentially compromised devices and networks
	36	Jonatan Mileski and Ilinka Ivanoska	Autism Spectrum Disorder Classification Using Functional Brain Connectivity	49	Jana Hristova and Verica Bakeva	Modelling the Dynamics of Heterogenous Populations			
	38	Zhivko Shishovski, Aleksandar Stojmenski and Ivan Chorbev	Comparison of Hénon Map With Logistic Map Performance in Encryption and Decryption of Images	104	Toma Simena and Metodija Jancheski	NPS Insight: An Intelligent System for Statistical Analysis of Net Promoter Score			
20:15	Gala Dinner (Live Band)								

From 10:00:
Workshop:
ChatMED
(Hall 3)

Workshop:
ChatMED
(Hall 3)

Sunday, 27 April 2025

10:30 - 11:00

Closing Ceremony

11:00 - 13:00

Social activities