APPLIED ARTIFICIAL INTELLIGENCE. EDITORIAL*

The European Research Group on Artificial Intelligence, EURGAI, is responsible for theoretical and applied research in Artificial Intelligence and organized the 1st ISCAAI' 2024 – International Scientific Conference on Applied Artificial Intelligence in Szeged, Hungary on May 11, 2024. The issue articles were presented on ISCAAI' 2024 conference, authors come from 5 countries: Hungary, Serbia, Romania, Montenegro and Ukraine. The research results in this journal include eleven articles.

The article *Artificial Intelligence-Generated Text in Higher Education – Usage and Detection in the Literature*, by László Berek, uses data from the Scopus and Web of Science databases to map the current usability of AI-generated text detectors in higher education and academia. One of the aims of the article is to provide an insight into the experiences with currently available AI detectors in higher educations. As AI-generated text tools continue to improve, detection tools on the market will have to try to keep pace.

The article titled *A Model for Autonomous Vehicle Obstacle Avoidance at High Speeds*, by Dragan D. Stamenković and Vladimir M. Popović, presents the model proved to be successful in guiding the vehicle through the test track at all speeds at which manoeuvres are possible. Bézier curves are shown to be a better choice at lower speeds, while paths based on Adams Car simulations are a better choice at higher speeds. An analysis of the curves for generating the paths through the test track was carried out, on the basis of which the Bézier curves were chosen.

The article *Assessing the Success of Artificial Intelligence Tools: an Evaluation of Chatgpt Using the Information System Success Model*, by Ugljesa Marjanovic, Gyula Mester and Bojana Milic Marjanovic, explores the success of AI tools, particularly ChatGPT, using the IS-success-based framework from the perspective of users. Structural Equation Modelling (SEM) techniques were applied to data collected from users of ChatGPT. The study empirically evaluated a model for measuring the success of AI tools, incorporating constructs from the updated DeLone and McLean IS success model. The findings of this study can be used to assess the success of AI tools like ChatGPT from the standpoint of their users.

The article titled *Graded Logics* is written by Dragan Z. Šaletić. In it, a brief overview of various kinds of logics, classical, fuzzy and graded, is given. Their role in modelling reasoning and differences between logics are discussed. Graded logic specifically is discussed. Possible and some realised applications of graded logic are pointed out. Conclusions about relations between considered logics are given.

The article *Artificial Intelligence as a Driver of Socio-Economic System Transformation in Ukraine*, by Sergiy V. Kovalevskyy, presents a research study focused on the current conditions of Ukraine's integration into the European space and rapid technological progress, artificial intelligence is becoming an important tool for ensuring sustainable development and the country's competitiveness. Developing open-source intelligent models to solve specific tasks and continuous user support are essential for leveraging AI's full potential in Ukraine's recovery and development.

*DOI: 10.7906/indecs.22.3.e.1

The article *On the Way to Updating the Measurement of Information Security Awareness – a Literature Analysis*, written by Gerda Bak, László Berek, Zoltán Som, Péter Ujhegyi and József Répás, reviews studies published between 1991 and 2022 in the field of cybersecurity and information security, examining trends and relevant publications and collaborations. The aim is to develop a modern, relevant, and up-to-date measurement method – named SAM (which stands for Security Awareness Measurement) – by analysing security awareness measurements and questionnaires used in recent years. The study uses the Web of Science database, Zotero reference management program, VOS viewer software, Scopus database, and GoogleScholar databases for analysis.

The article titled *Internet of Things and Fuzzy Logic based Smart Balcony Plant Care System from a Renewable Resources*, by János Simon, proposes a smart irrigation system that helps to maintain a balcony plants. The system provides real-time information about the environmental parameters as humidity level of soil, temperature of surrounding environment, and status of the watering reservoir. Fuzzy logic controller is used to compute input parameters like soil moisture, temperature water tank level and to produce outputs of the water pump status. The system allows the collection of rainwater or condensate water from the air conditioner into a tank or, in the last case, from the water supply network.

The article *Improving Synchronous Motor Modelling with Artificial Intelligence*, by Petar Čisar, Sanja Maravić Čisar and Attila Pásztor, proposes the use of machine learning algorithms for modelling synchronous motors. The application of machine learning algorithms for modelling synchronous motors shows significant promise. These models can accurately predict excitation currents, thereby optimizing motor performance and operational efficiency. Future research could focus on refining these models further and evaluating them in industrial settings to validate their effectiveness and reliability.

The article titled *Facial Recognition for Security Systems*, by Robert Pinter and Sanja Maravić Čisar, evaluates the performance of the Viola Jones and YOLOv3 algorithms for facial recognition under different conditions and highlights their strengths and weaknesses. Analysis focusses on facial emotions, angle recognition, lighting, and the effects of hidden facial features. These algorithms should be improved in the future for extreme angles and partial occlusions, and their integration with other recognition methods should be investigated.

The article *Learning Web Development using GitHub Copilot in and outside Academia: a Blessing or a Curse* written by Gabriel Oliver Mesaroš, investigates the usage of GitHub Copilot, an AI-powered coding assistant owned by Microsoft and GitHub, in the process of learning and teaching web development both in formal academic, and informal settings. The paper presents an overview of the current situation with AI-assisted programming tools such as GitHub Copilot and its impact and irrelevance on Web Development education especially for the early learning stages. Professionals both in and outside academia agree that usage of AI Pair Programming tools such as GitHub Copilot is neither recommended nor essential when learning or teaching Web Development.

The article titled *Artificial Intelligence Applied in Enterprise Resource Planning*, by Sánta János, presents the use of Generative AI for Enterprises: source of actionable insights. Finance people will continue to have access to full data source and data analyses therefore they will become a strategic function of the organization, and will provide guidance, consultancy in real time to managers of the business organizations.

All the presented articles provide the careful studies of the Applied Artificial Intelligence, and the editors believe that the whole issue is a very interesting read.

Cordially,

Szeged, 20th June 2024

Guest editor

Gyula Mester
Orcid ID: 0000-0001-7796-2820
e-mail: drmestergyula@gmail.com